



BRIDGEWATER STATE COLLEGE
UNDERGRADUATE/GRADUATE
CATALOG 1993–1994



CALENDAR

1993-1994

Fall Semester — 1993

September

- 6 (Monday)..... Labor Day — No classes
- 7 (Tuesday)..... Registration/Orientation
- 8 (Wednesday)..... Classes begin at 8:00 a.m.
- 30 (Thursday) Last day for graduate students
to file request for November
Comprehensive Examinations

October

- 1 (Friday) Fall Convocation;
Last day for receiving
completed master's degree and CAGS
applications for November admissions
- 11 (Monday) Columbus Day — No classes
- 25 (Monday) End of First Quarter
- 26 (Tuesday) Beginning of Second Quarter

November

- 1 (Monday) Last day for graduate students
who expect to receive their degree
in January to file the appropriate
degree application form
- 11 (Thursday)..... Veteran's Day — No classes
- 16 (Tuesday)..... Thursday schedule of classes
- 24 (Wednesday) Thanksgiving Recess begins
at the close of classes
- 29 (Monday)..... Classes resume at 8:00 a.m.

December

- 1 (Wednesday)..... Last day for receiving
completed master's degree and CAGS
applications for February admissions
- 14 (Tuesday)..... First Semester classes end
- 16 (Thursday) First Semester examinations begin
- 22 (Wednesday) First Semester examinations end

Spring Semester — 1994

January

- 11-13 (Tues., Wed., Thurs.)... Registration/Orientation
- 17 (Monday) Martin Luther King Day — No classes
- 18 (Tuesday)..... Classes begin at 8:00 a.m.
- 28 (Friday)..... Winter Commencement

February

- 1 (Tuesday) Last day for graduate students
who expect to receive their degree in May to
file the appropriate degree application forms;
Last day for graduate students to file request
for March Comprehensive Examinations
- 21 (Monday) Presidents' Day — No classes
- 22 (Tuesday) Monday schedule of classes

March

- 1 (Tuesday) Last day for receiving
completed master's degree and CAGS
applications for May admissions
- 4 (Friday) End of Third Quarter — Spring Recess
begins at close of classes
- 21 (Monday)..... Classes resume at 8:00 a.m.
Beginning of Fourth Quarter

April

- 18 (Monday)..... Patriot's Day — No classes
- 20 (Wednesday)..... Monday schedule of classes

May

- 6 (Friday)..... Second Semester classes end;
Last day for graduate students who expect
to receive their degree in August to file the
appropriate degree application forms
- 9 (Monday) Second Semester examinations begin
- 16 (Monday)..... Second Semester examinations end
- 17-20 (Tues.-Fri.) Evaluation Days
- 21 (Saturday)..... Spring Commencement



ARCHIVES
BRIDGEWATER STATE COLLEGE
BRIDGEWATER, MASSACHUSETTS 01921

Bridgewater State College Undergraduate/Graduate Catalog 1993-1994

Accreditations and Certifications

New England Association of Schools
and Colleges, Inc.

American Chemical Society

Council on Social Work Education

Federal Aviation Administration

Interstate Certification Compact

National Athletic Trainers Association

National Council for the Accreditation of
Teacher Education

This catalog is a guide for information only and not a contract. The college reserves the right to change requirements for degrees, academic policies, prerequisites, fees, scheduling, and related matters. Every effort is made to implement such changes in such a way that any new curricular requirements will work no hardship on a student who has entered under an earlier set of requirements.

Table of Contents

This is Bridgewater State College

History of the College	4
Mission of the College	5
Institutional Values	5
Goals	5
College Profile	6
Tuition and Fees	9
Academic Programs	9
The Campus	10

The Undergraduate Academic Experience

Introduction	12
The Faculty	13
Learning Resources	13
Orientation for New Students	14
The Academic Advising Center	14
Enrichment Program	14
Honors Program	15
Internships	16
Exchange and Study Abroad	16
Directed Study	16

Cultural, Social, Athletic, and Recreational Activities

Introduction	17
Campus Center	18
Clubs and Organizations	18
Religious Life	19
Varsity Athletics	19
Intramural Program	19
Club Sports Programs	19

Services to Students

Introduction	20
Career Planning and Placement	20
Campus Child Care Center	21
Counseling Center	21
Food Services	21
Health Services	21
Health/Accident and Personal Property Insurance	21
International Student Office	22
Office of Affirmative Action	22
Office of Minority Affairs	22
Students with Disabilities	22
Transportation	23

Veterans Affairs	23
------------------	----

Campus Events and Special Programs

Introduction	24
Alumni Weekend	24
Archaeological Excavations	24
Bridgewater Performing Arts Series	24
Children's Physical Developmental Clinic	25
Children's Theatre	25
Commencement	25
Convocation	25
Family Weekend	25
Hall of Black Achievement	25
Homecoming	26
Honors Day	26
Management Science and Technology Council	26
Martin Luther King, Jr. Celebration	26
Minority/Bilingual Student Awareness Day	26
Orientation for New Students	26

Housing

Residential Living	27
Off-Campus Housing	28

Admissions

Freshman Admissions	29
Decisions and Notification Dates	31
Commonwealth Transfer Compact	32
Readmission	33
Special Students	33
Special Admissions Programs	33
International Admissions	34
New England Regional Student Program	34
Health	34
Advanced Standing	34
Second-Degree Option	34
College-Level Examination Program (CLEP)	35

Tuition and Fees

Application and Advance Payment Fees	37
Tuition and Fees	37
Semester Residence Halls and Dining Charges	38

Refund Policy	39
---------------	----

Financial Aid

Introduction	40
Program Summary	41
Student Employment	43
Presidential Scholars Tuition Waiver	43
Alumni Scholarships	43
Graduate Assistantships	43
Other Scholarships	43
Army Reserve Officers Training Corps	43
Air Force Reserve Officer Training Corps	43

Undergraduate Academic Programs

Bachelor of Arts/ Bachelor of Science	44
Bachelor of Science in Education	44
Major	45
Double Major	45
Concentration	45
Minor	46
General Education Requirements	47
Directed Study	51
Internship	51
Honors Program	51
Multidisciplinary Programs	53
Cross Registration	53
5ACHEM	53

Undergraduate Academic Policies

Academic Year	54
Graduation Requirements	54
Degree Application	54
Graduation with Honors	55
Grading System	55
Dean's List	55
Academic Standing	56
Satisfactory Academic Progress	56
Classification Designation	56
Registration	57
Course Loads	57
Attendance Policy	57
Course Drops and Adds	57
Withdrawal From Courses	57
Course Audit	58
Leave of Absence	58

Withdrawal from College	58
Declaration of Major for Freshmen	58
Change of Major for Upperclassmen	58
Declaration of Minor	59
Credit by Examination	59
Transfer of Credit after Admission	59
Plagiarism	59
Standards for Representing the College ..	58
Intercollegiate Eligibility	59
Dismissal Policies	60

The Graduate School

Graduate Programs	61
Master of Arts	61
Master of Arts in Teaching	62
Master of Education	62
Master of Science	62
Certificate of Advanced Graduate Study	62
Certification Programs	63
Admissions	
Admission Standards	63
Application Procedures	64
Action by the Department	66
Action by the Graduate School	66
Graduate Advisers and Program Planning	66
Change in Program	66
General Policies and Procedures	
Grading System	66
Academic Probation	66
Academic Dismissal	66
Academic Average for Graduate Degrees	67
Satisfactory/Reasonable Progress	67
Statute of Limitations	67
Maximum Credit Load	67
Full-time/Part-time Student Status	67
Graduate and Undergraduate Credit	67
Program and Course Prerequisites	67
Transfer Credit	67
Repeating Courses	68
Incompletes	69
Registration	69
Withdrawal	69
Deadlines	69
Change of Name/Address	69
Graduate Assistantships	70
Independent Study	70
Thesis	70
Exit Requirements	71
Comprehensive Examination	71
Application to Graduate	71
Graduate Program Requirements	
Master of Arts	72
Master of Arts in Teaching	72
Master of Education	73
Master of Science	73
Certificate of Advanced Graduate Study (CAGS)	74
Program and Course Offerings	
General Information	75
Course Numbering System	75
Prerequisites	75
Semester Notations	76
Meeting Times	76
School of Arts and Sciences	77
Undergraduate Programs	78
Graduate Programs	79

Department of Art	80
Department of Biological Sciences	89
Department of Chemical Sciences	98
Department of Earth Sciences and Geography	106
Department of Economics	118
Department of English	122
Department of Foreign Languages	131
Department of History	140
Department of Management Science and Aviation Science	153
Department of Mathematics and Computer Science	168
Department of Music	179
Department of Philosophy	185
Department of Physics	190
Department of Political Science	195
Department of Psychology	200
Department of Social Work	211
Department of Sociology and Anthropology	215
Department of Speech Communication, Theatre Arts, and Communication Disorders	226
School of Education	240
Changes in Professional Certification ..	242
Admission and Retention in Professional Education	
Undergraduate	242
Graduate	244
Verification of Completion of Program ..	245
Certificate of Advanced Graduate Study (CAGS)	246
Course Offerings	246
Department of Elementary and Early Childhood Education	248
Department of Movement Arts, Health Promotion and Leisure Studies	262
Department of Secondary Education and Professional Programs	284
Counseling Programs	290
Educational Leadership and Administration	293
Media and Librarianship	295
Department of Special Education	311
Introductory College Skills	321
Multidisciplinary and Pre-Professional Programs	322
Board of Trustees	332
Officers of the College	333
Administrative and Other College Offices	334
Maxwell Library Staff	343
Faculty	345
Emeritus Faculty	356
Index	361
Directions for Correspondence	364

Policy on Non-Discrimination and Affirmative Action

As part of the Massachusetts Public Higher Education System, Bridgewater State College is committed to a policy of non-discrimination and affirmative action in its educational programs, activities, and employment practices. It is the policy of the college not to discriminate on the basis of race, sex, sexual orientation, color, national origin, age, religion, or handicap, in fulfillment of the requirements of Executive Orders 11246 and 11375, Titles IV, VI, VII, IX, and X of the Civil Rights Act of 1964 as amended in 1972, and all pertinent laws, regulations, and executive directives of the Commonwealth of Massachusetts and other applicable state and federal statutes. Inquiries concerning the college's compliance with affirmative action programs may be addressed to Assistant to the President, Affirmative Action/Minority Affairs, Bridgewater State College, Bridgewater, MA 02325. Telephone (508) 697-1241, or write to the Office for Civil Rights, Washington, D.C.

This is Bridgewater State College

History of the College

Bridgewater State College, one of the oldest public colleges in America, is rich in history and tradition. John Quincy Adams, Daniel Webster and Horace Mann were among the early supporters of the school, which was founded to prepare teachers for the public schools of the Commonwealth of Massachusetts. The first class consisting of twenty-one women and seven men, matriculated in September 1840, and met in the basement of the former Town Hall. In 1846 the school moved to the present quadrangle, into the first building in America erected for the preparation of teachers. As Bridgewater State College and the United States grew up together, the school's graduates traveled far beyond state borders, establishing dozens of schools and colleges along the moving frontier, and even as far away as Japan.

In 1921 Bridgewater State College was authorized to award the bachelor of science in education degree, and in 1932 it became Bridgewater State Teacher's College. Graduate courses were first offered in 1937. In 1960 a full-fledged, multipurpose liberal arts curriculum was introduced and the degree of bachelor of arts was first conferred.

Since 1960 the college has developed into a comprehensive institution, so that today its approximately 242 full-time faculty offer an array of twenty-nine liberal arts and professional curricula to some 5,300 full-time undergraduates and 3,000 part-time undergraduate and graduate students. The Graduate School offers thirty-six Master's and Certificate of Advanced Graduate Studies (CAGS) programs.

The college's transition to a comprehensive institution is attributable to its geographic location. For the past two decades southeastern Massachusetts has been the only region in the Commonwealth to record population growth. Even more significant perhaps, in a state with the greatest concentration of colleges in the nation, only two comprehensive baccalaureate institutions of public high education serve this region: Bridgewater State and the University of Massachusetts at Dartmouth. Formalized transfer agreements with the three community colleges in the region (Massasoit, Bristol and Cape Cod), bring large numbers of students to Bridgewater State College in the pursuit of a bachelor's degree. Nearly eighty percent of our students are drawn from southeastern Massachusetts, and a similar percentage of alumni live within a fifty-mile radius of the campus.



This is Bridgewater State College

Mission of the College

The mission statement of Bridgewater State College was adopted in 1992. It states:

For over a century and a half Bridgewater State College has proudly and with distinction played a unique and leading role in the educational life of southeastern Massachusetts and in the Commonwealth as a whole. As a public regional institution of higher education, it responds creatively to the needs of a diverse population by generating and replenishing resources essential to the intellectual, economic, cultural and civic well-being of the areas which it serves. Through strong undergraduate and graduate programs in the arts, sciences and professions, Bridgewater State College liberally educates its students to think critically, communicate effectively and act responsibly within a context of personal and professional ethics. Essential to this mission is the college's emphasis on teaching life-long learning and a campus life that nurtures individual development and encourages cultural diversity in a rapidly changing state, nation and world.

Institutional Values

The institutional values of Bridgewater State College are the foundation of our mission statement. The primary focus of this institution is on undergraduate education with an accessible teaching faculty which fosters exemplary academic standards. Likewise, we promote graduate education that supports the primary mission and focus of the college. We value scholarship and teaching within an environment of collegiality, integrity and professional ethics. We promote individual potential and scholastic achievement by means of a broad spectrum of learning experiences.

We value the uniqueness, worth and dignity of each person. While we recognize that students have responsibility for their own lives, we also believe that a supportive and friendly community life helps students learn and encourages their interaction with faculty and staff. We value a continuing association with our alumni.

We foster a liberal education for all students leading to lifelong personal and professional growth and strongly believe in academic responsibility and freedom, including the freedom to doubt and inquire. We place major emphasis on developing critical thinking and

modeling effective citizenship. Consequently, discrimination, harassment and intimidation are unacceptable.

We value cultural diversity and strive to provide access to students of all ages, backgrounds and financial means. We believe that our institution should be an important resource for the entire region and provide a global perspective within a local context.

Goals

Consistent with its mission and values, the goals of Bridgewater State College are to:

- 1) become one of the leading undergraduate regional teaching universities in the United States;
- 2) develop a broad array of high quality graduate programs appropriate to the needs of the people of southeastern Massachusetts;
- 3) increase the representation of racial and ethnic minorities among students, faculty and staff.
- 4) strengthen the institution's position as a national leader in the field of teacher education and become a leader in the development, application and dissemination of technologies related to teaching;
- 5) promote and support professional growth and renewal of faculty, administrators and staff;
- 6) broaden sources of revenue to support the institution's mission;
- 7) continue to maintain and enhance a campus community life that promotes the cognitive and affective development of each individual;
- 8) develop and enhance the institution's role as an intellectual and academic bridge between the region and the global community.

Bridgewater State College

College Profile 1992 -1993

LOCATION: Bridgewater, Massachusetts, approximately 28 miles southeast of Boston in historic Plymouth County

CHARACTER: State-supported, four-year, co-educational.

FACULTY: 242 full-time faculty members of whom 73.4% hold earned doctorates or other appropriate terminal degrees.

CAMPUS: 28 academic, residential and service buildings on a 195-acre campus.

Headcount Enrollment by School, Class and Gender Fall 1992

	MALE	FEMALE	TOTAL
<i>School of Arts & Sciences</i>			
Freshmen	404	416	820
Sophomores	449	447	896
Juniors	544	550	1094
Seniors	546	673	1219
Unclassified	10	47	57
Total	1953	2133	4086

<i>School of Education</i>			
Freshmen	78	266	344
Sophomores	76	246	322
Juniors	77	324	401
Seniors	86	465	551
Unclassified	0	1	1
Total	317	1302	1619

<i>Graduate School</i>			
Post-Bachelor Certificates	4	14	18
MA	22	65	87
MS	11	13	24
MAT	35	48	83
MEd	70	385	455
CAGS	30	48	78
Total	172	573	745

<i>Non-Matriculating and Matriculated Undeclared</i>			
Undergraduate	532	694	1226
Graduate	173	501	674
Total	705	1195	1900

Total Headcount for Fall 1992 3147 5203 8350

Headcount Enrollment By Residence Fall 1992

California	1
Connecticut	36
Florida	1
Kansas	1
Massachusetts	8089
Maryland	3
Maine	20
Michigan	1
North Carolina	1
New Hampshire	20
New Jersey	16
New York	12
Ohio	1
Pennsylvania	4
Puerto Rico	1
Rhode Island	70
Virginia	1
Vermont	11
Wisconsin	1
Total - US	8290

Canada	4
Cape Verde	1
Chile	1
Dominican Republic	1
England	11
France	2
Germany	2
Greece	2
Hong Kong	1
India	1
Japan	6
Liberia	1
Mexico	1
Norway	1
Pakistan	1
People's Republic of China	10
South Africa	3
Switzerland	1
Taiwan	1
Turkey	1
Ukraine	1
Total - International	53

This is Bridgewater State College

• Total Majors Declared Fall 1992

Undergraduate Studies Baccalaureate Degree

Anthropology	28
Anthropology	15
Cultural Anthropology	9
Public Archeology	4
Art	125
Art	107
Crafts	1
Fine Arts	5
Graphic Design	12
Aviation Management	311
Aviation Management	61
Aviation Science	14
Flight Training	236
Biology	169
Chemistry	37
Biochemistry	2
Chemistry	35
Chemistry-Geology	11
Communication Arts & Sciences	449
Communication Arts & Sciences	38
Communication Disorders	138
Speech Communication	228
Speech Communication & Theatre	
Theatre	45
Computer Science	111
Early Childhood Education	382
Early Childhood Education	381
Preschool	1
Earth Science	41
Earth Science	33
Geology	8
Elementary Education	569
Elementary Education	568
Middle School Education	1
English	216
English	201
Writing	15
French	6
Geography	33
Environmental Geography	8
Geography	25
History	181
Community History	2
History	173
Military History	6
Management Science	1214
Accounting	223
Energy & Environmental Management	35
Finance	60

Finance & Accounting	82
General Management	331
Information Systems Management	67
Management Science	207
Marketing	202
Transportation	7
Mathematics	68
Music	33
Philosophy	20
Applied Ethics	1
Philosophy	17
Religious Studies	2
Physical Education	508
Athletic Training	46
Coaching	12
Exercise Science	54
Health	15
Motor Development	35
Physical Education	335
Program Children & Youth	1
Recreation	10
Physics	16
Physics	16
Physics-Computer Electronics	0
Political Science	188
International Affairs	7
Legal Studies	20
Political Science	155
Public Administration	6
Psychology	499
Industrial-Personnel Psychology	21
Medical Psychology	12
Psychology	466
Social Work	206
Sociology	258
Criminology	105
Sociology	151
Third World Studies	2
Spanish	24
Special Education	185
Undeclared	633
Total - Baccalaureate	6521

Graduate Studies Master's Degrees

Behavioral Science	0
Biology	9
Chemistry	5
Communication Arts & Sciences	1
Communication Disorders	21
Computer Science	14

Bridgewater State College

Counseling	86
Creative Arts	8
Early Childhood Education	51
Earth Science	1
Elementary Education	107
Elementary School Mathematics	0
English	29
Foreign Languages	0
Geography	2
Health Promotion	20
History	18
Humanities	0
Instructional Media	6
Mathematics	15
Physical Education	10
Physical Science	3
Physics	1
Psychology	39
Reading	44
School Administration	33
School Librarianship	13
Social Science	14
Special Education	86
Speech Communication	6
Total - Master's	642

Undergraduate Certificate Programs

Accounting & Finance	12
Advanced Paralegal	0
Computer Science	3
Marketing Management	2
Media Studies	1
Paralegal Studies	37
Public Sector Management	1
Substitute Teaching	2
Total - Undergraduate Certificate Programs	58

Graduate Certificate Programs

Accounting & Finance	8
Coaching	0
Information Management Systems	1
Marketing Management	0
Operations Management	1
Other	8
Total - Graduate Certificate Programs	18

Certificate of Advanced Graduate Study (CAGS)

Behavioral Science	0
Creative Arts	0
Education	84
Counseling	10
Early Childhood Education	1
Elementary Education	2
Health Promotion	1
High School, Middle School & Adult Education	1
Instructional Media	4
Physical Education	1
School Administration	55
School Librarianship	1
Special Education	8
Natural Science & Mathematics	0
Total - CAGS	84

Non-Matriculated	1267
Graduate	674
Undergraduate	593
Total - Undergraduate	7172
Total - Graduate	1418
Grand Total	8590

NOTE: Data above reflect 240 students pursuing double majors.

• Tuition and Fees (1993-1994 academic year):

Full-time undergraduate students who are Massachusetts residents pay approximately \$1,408.00 per year in tuition and approximately \$1,965.00 in required fees. Students residing on campus are charged between \$2,226.00 and \$2,496.00 per year, depending on the facility occupied. Board for resident students is approximately \$1,650.00 per year. Please note that all figures are subject to change. For complete information on tuition and fees for all students, see the section of this catalog entitled *Tuition and Fees*.



Academic Programs

- **Undergraduate Majors:** Twenty-nine undergraduate majors are currently offered. For more detailed information, see requirements listed in the appropriate department of this catalog.

ANTHROPOLOGY

(one may concentrate in):

Cultural Anthropology
Public Archaeology

ART

(one may concentrate in):

Graphic Arts
Crafts

Fine Arts

AVIATION SCIENCE

(one may concentrate in):

Flight Training
Aviation Management

BIOLOGY

BUSINESS - see

Management Science

CHEMISTRY

PROFESSIONAL CHEMISTRY

(one may concentrate in):

Biochemistry

CHEMISTRY-GEOLOGY

COMMUNICATION ARTS & SCIENCES

(one may concentrate in):

Speech Communication
Theatre Arts

Communication Disorders

COMPUTER SCIENCE

EARLY CHILDHOOD

EDUCATION

EARTH SCIENCES

(one may concentrate in):

Geology

ECONOMICS

ELEMENTARY EDUCATION

(one may concentrate in):

Middle School Education

ENGLISH

(one may concentrate in):

Writing

FRENCH

GEOGRAPHY

(one may concentrate in):

Environmental Geography

HISTORY

(one may concentrate in):

Community History
Military History

MANAGEMENT SCIENCE

(one may concentrate in):

General Management
Energy & Environmental
Resources Management

Finance

Accounting

Marketing

Transportation

Information Systems

Management

MATHEMATICS

MUSIC

PHILOSOPHY

(one may concentrate in):

Applied Ethics

PHYSICAL EDUCATION

(one may concentrate in):

Athletic Training

Coaching

Exercise Science/

Health Fitness

Motor Development Therapy/

Adapted Physical Education

Recreation

PHYSICS

(one may concentrate in):

Computer Electronics

POLITICAL SCIENCE

(one may concentrate in):

International Affairs

Legal Studies

PSYCHOLOGY

(one may concentrate in):

Industrial Personnel

Psychology

Medical Psychology

SOCIAL WORK

SOCIOLOGY

(one may concentrate in):

Criminology

Third World Studies

SPANISH

SPECIAL EDUCATION

Bridgewater State College

- **Graduate Programs:** Thirty-six master's degree and CAGS (Certificate of Advanced Graduate Study) programs are currently offered. For complete information see the *Graduate School* section of this catalog.

Master of Arts (M.A.)
Biology
Chemistry
Communication Studies
English
History
Psychology

Master of Arts in
Teaching (M.A.T.)
Behavioral Sciences
Biology
Chemistry
Creative Arts
Earth Sciences
English
Foreign Languages
Geography
History
Mathematics
Physical Sciences
Physics
Social Sciences
Speech Communication
and Theatre

Master of Education
(M.Ed.)
Counseling
Early Childhood Education
Elementary Education
Elementary School Mathematics
Health Promotion
Instructional Media
Reading
School Administration
School Librarianship
Special Education

Master of Science (M.S.)
Computer Science
Physical Education

Certificate of Advanced
Graduate Study
Behavioral Sciences
Creative Arts
Education
Natural Sciences and
Mathematics

- **Certificate Programs:** Certificate Programs, listed below, are offered to high school graduates who are not matriculated in a degree program. For program requirements, and additional information, see the *Course Offering Brochure* published each semester.

Accounting
Finance
Marketing Management
Computer Science
Paralegal Studies
Public Sector Management

Advanced Paralegal Studies
Substitute Teachers and
Instructional School
Aides at the Elementary
and Early Childhood Levels

Graduate Certificate Programs are offered in:

Special Studies in Administration and Management
Accounting
Finance
Information Systems Management
Operations Management
Marketing Management
Special Studies in Public Affairs
Coaching

The Campus

Visitors to the Bridgewater campus frequently comment on its scenic beauty. Twenty-eight red brick buildings give the campus a distinctively colonial flavor, and spacious green lawns complemented by tree-lined paths are among the college's most attractive physical features.

The 28 academic and residential campus building include the following:

- **Boyden Hall** was constructed in 1926 and has since been renovated and reconstructed. This handsome building houses administrative offices and classrooms. The building is named for Albert Gardner Boyden (Principal 1860-1906) and his son Arthur Clarke Boyden (Principal 1906-1931, President 1931-1932). A bronze tablet inside the building is inscribed with these words: "*They gave their hearts, their minds, and their lives to this school.*"
- The **Clement C. Maxwell Library** is a modern four-story building with the capacity to house 425,000 books and accommodate 2,500 people. It is named for Dr. Clement C. Maxwell, president from 1952 to 1962, who believed that a library "is the heart of the college."

In addition to classrooms and seminar rooms, the library has a small auditorium, a media center and many individual study areas.

An outstanding feature of the Maxwell Library is its constantly changing exhibits, reflecting many areas of contemporary and historical interest.

Periodic lectures, musical programs and art exhibits are scheduled in the Library Heritage Room.

- The **Art Center** is the oldest existing campus structure, built in 1906 as a gymnasium. Through the years it has also served as a library and office building. Today, following extensive renovation, it houses art facilities, including studios for painting and sculpture and facilities for weaving, silk screening, ceramics, and metal work.

This is Bridgewater State College

- The **John J. Kelly Gymnasium** was built in 1957. It houses athletic and recreational facilities, including a large and small gym, and olympic-size swimming pool, a weight room, faculty offices, and classrooms. The Human Performance Laboratory, where extensive cardiovascular research is carried on, is also located in this building.
- The **Marshall Conant Science Building** was opened in 1964, and is named for the school's second principal. The science building houses classrooms, laboratories, a lecture hall, and a host of modern equipment, including a Zeiss Electron Microscope and aviation flight simulators.
- The **Martha Burnell Campus School** is the college's one-story campus school wing housing 13 classrooms plus a music room, art room, gymnasium, solar greenhouse, cafeteria, and library. Approximately 285 students in grades K-6 attend the campus school. Adjoining this is the three-story **Walter and Marie Hart Hall**, where college classrooms and faculty offices for several academic departments are located.
- The **Adrian Rondileau Campus Center** is the "living room" of the campus, a multi-million dollar structure that features a three-story main building with offices for student organizations, a rathskeller, television studio, radio station, ballroom, music lounge, study areas, dining room, plus other facilities, and adjoining complexes of a 1,450-seat auditorium (with theatre production facilities that surpass many professional theatres) and a 900-seat cafeteria.

The campus center contributes to the educational, cultural, and social experiences of students by providing them with an opportunity to participate in such diverse activities as minicourses, concerts, drama workshops, movies, lectures, and other programs.

The campus center is named for Dr. Adrian Rondileau, President from 1962-1986 and 1988-1989.

- **Tillinghast Hall** was built in 1916 and was formerly a residence hall. Today the Office of Financial Aid, Health Services, and faculty offices are located here, as well as a large dining hall for resident students.
- The **Davis Alumni Center**, the first privately funded building on the Bridgewater State College campus, is a hub of activity for students, faculty, staff, the entire Bridgewater community, and of course alumni. The center is home to the Office of Alumni Relations and

Office of Development, and serves as a welcoming facility hosting a diversity of events. Students, alumni, and friends may reserve the center for workshops, meetings, and receptions — not uncommon activities for the center on any given day or night. A modern and attractive facility, the Davis Alumni Center provides a warm environment for alumni to return "home."

- The **Edward C. Swenson Athletic Fields** are used by a variety of student athletic teams. The football field is surrounded by a running track and there are also fields for baseball, softball, and soccer. The **Dr. Henry Rosen Memorial Tennis Courts** are located on upper campus.
- The **Catholic Center** was built in 1965 by the Archdiocese of Boston. The **Christian Fellowship House** is located adjacent to the college. The **Menorah Club** has space reserved in the Campus Center.
- The **Greenhouse and Stearns/McNamara Memorial Garden** are located beside Pope Hall, a student resident hall. The greenhouse was built in 1911 and the memorial garden is a living laboratory of botanical studies.
- **Seven residence halls and one student apartment complex** comprise the residential living accommodations at Bridgewater.
- In 1991, U.S. Congressman J. Joseph Moakley announced that he had secured a \$10 million dollar federal grant to establish a center for technological applications at the college. The college has named the center **The John Joseph Moakley Center for Technological Applications**. The center is based on plans developed at the college to design a facility where the latest advances in educational technology will be researched, tested, and disseminated nationally to enhance teaching and learning, particularly at the K-12 level.

The Undergraduate Academic Experience

Introduction

Small classes, a superb faculty, the extensive resources of the Maxwell Library, modern equipment and facilities, and a supportive network of advisers and counselors are the key elements of the academic environment at Bridgewater State College.

Combined with these are a wide variety of cultural, social, athletic, and recreational activities which complement the learning process and add different dimensions to the total academic experience.

The college has a commitment to the success of its students. The faculty and staff strive to help each student achieve his or her full potential. The college's long tradition of academic excellence is built upon a foundation of challenging studies, a stimulating atmosphere, and a spirit of community and partnership. The rewards of success are both personal and professional; the friendships one makes, and the opportunities for growth discovered, can last a lifetime.

Recognizing that a narrow focus of learning is a serious threat to a student's economic and intellectual future, Bridgewater expects all students to pursue common patterns of study in addition to a major field of study.

Advancing technology, moving at breathtaking speed, adds infinite amounts of new information. The ability to assimilate complex ideas from a variety of sources requires fundamental knowledge in different areas of history, science, the arts, literature, language, and philosophy as well as specialized, in-depth skill in one major area.

A college education should provide a person with broad information of lasting value no matter what vocation that man or woman pursues. Since studies reveal that today most people change careers as many as five times during their working lives, the importance of this foundation is obvious.

The liberal arts are the core of the Bridgewater experience. Every student, no matter what major field is selected, completes what are called the "General Education Requirements" These are areas of knowledge and understanding that are of general significance. This exposure to broad fields of learning is a foundation for specific studies in a student's major field. Usually, most Bridgewater students complete the "GER's" during the first two years of college and spend the last two years in their major field of study. An important part of this emphasis—in the "GER" courses and in courses in the major field—involves writing and improving writing skills.

Our chief instrument of communication over time and space is language. The ability to express our ideas and react to the ideas of others is rooted in language skills. Technology has accelerated dramatically the need for people who can communicate quickly, clearly, and effectively.

No matter what his or her specialty may be, today the person who can write with confidence and skill has far more opportunity to be useful and successful than those who cannot. In survey after survey, business executives rank proficiency in communication as the most important skill an employee can possess.

The Undergraduate Academic Experience

That is why the teaching, practice, and improvement of writing is emphasized so much at Bridgewater. Courses in all disciplines have writing components and, by the end of the junior year, students are required to pass an examination demonstrating their writing skill. A student's ability to write clearly and effectively is one of the primary objectives of the general education program at Bridgewater.

We believe firmly in our obligation to prepare students for the world they will encounter and the demands and expectations they will confront.

The college has a rich and varied array of majors, minors, and program options. For the undergraduate student, there are more than 100 such possibilities to help prepare for a career.

The academic experience available to students at Bridgewater State College may be summed up in a few words:

Challenging . . . Comprehensive . . . Flexible . . .
Outstanding . . . Opportune.

The Faculty

Bridgewater State College has an outstanding faculty of men and women who take their responsibility for teaching seriously. Because most classes are small (the average class size is less than 30 students), there is an opportunity for faculty and students to work closely. Many students assist faculty in research projects outside the classroom as well.

Bridgewater State College professors are recognized for their expertise. 73.4% hold earned doctorates and many faculty members serve as consultants and advisers to corporations, banks, health organizations, school systems, and government agencies. Others are leaders in professional societies, conducting pioneering research in their respective fields.

Learning Resources

Clement C. Maxwell Library

The library now has more than 250,000 volumes and subscribes to over 1,400 periodicals and newspapers. These are supplemented by microfilm and microfiche holdings, including ERIC, a nationwide pooling of information on education and allied social sciences, and HRAF (Human Relations Area Files), a collection of primary source materials on selected cultures and

societies representing all major areas of the world.

Fee-based, on-line searching services are available in the reference department.

The library collection includes maps and government documents (United States, Massachusetts, and Canadian). In addition, a wide selection of CD-ROM databases are available to the college community. Informational brochures, bibliographies, library handbooks and other handouts can be obtained from the library. Professional assistance in the use of library resources is also provided. The library has an on-line catalog and an automated circulation system. Interlibrary loan services are provided to faculty, students, and staff.

Special collections include an extensive children's collection; the Theodore Roosevelt and Horatio Alger collections (both donated by the late Dr. Jordan Fiore, professor of history); a collection of books by Bridgewater authors; a Charles Dickens' collection; a collection of early American textbooks; and an extensive collection of Lincolniana.

The library has a 20,000 volume "Library of American Civilization" and a 6,000 volume "Library of English Literature," both on ultramicrofiche; and is a depository for Canadian government documents.

A curriculum center for teachers in training and in the field offers a large sampling of textbooks (K-12), teaching kits, standardized tests and allied materials. There is also an extensive collection of young adults' and children's books.

CART

The Center for the Advancement of Research and Teaching (CART) was established to improve the availability of peer group and institutional support for faculty and librarians to enhance their teaching performance and/or research and scholarly activity. Located on the second floor of the Maxwell Library adjacent to the Curriculum Library, CART has materials, periodicals, and computer equipment available to advance its purpose.

Departmental Resources

The college has extensive computer facilities for instructional purposes (open seven days a week, from early morning to late at night), and resources that range from a Zeiss Electron Microscope in the Department of Biological Sciences and an astronomy observatory in the Department of Earth Sciences and Geography to a writing laboratory offered by the Department of English.

Bridgewater State College

Facilities for weaving, ceramics, sculpture, and painting are available in the Department of Art, and flight simulators are provided in the Department of Management Science and Aviation Science. These and many other modern resources support the educational mission of the college, and insure that Bridgewater students can learn and apply contemporary knowledge and skills.

Prospective students and their families interested in visiting the college and viewing learning resources are encouraged to contact the Office of Admissions for dates of campus visitations.

Orientation for New Students

Orientation for freshmen and transfer students is really an introduction to the complete campus environment — academics, student services, extracurricular opportunities, and the college itself. Most of our new students attend orientation in late May or early June.

Orientation is the first activity that most of our new students participate in as members of the college community, and the program is designed to make them and their parents familiar with the campus and comfortable as members of the community.

Orientation provides the chance to meet with members of the faculty and staff, take a campus tour, enjoy recreational programs, learn about resources such as financial aid, academic advising, and other support services, and become acquainted with other new students. During orientation new students also register for the courses they will be taking in the next semester, guided in their selection by the advising staff.

The orientation staff includes approximately thirty "orientation leaders"—upperclassmen specially selected for this purpose whose demonstrated leadership, academic achievement, and involvement in campus life have qualified them to fulfill this important function of welcoming new students.

The Academic Advising Center

Several years ago Bridgewater State College embarked on a bold new program to help freshmen students adjust to the college environment. The program, which has since drawn considerable comment in professional journals and interest from other schools, is based on our belief that the transition from high school is a complex one, demanding as much individual attention as possible.

Today the Haughey Academic Advising Center is solidly established, occupying a suite of offices in the Maxwell Library. Volunteers from the full-time faculty, plus administrators experienced in helping freshmen, staff the center. There is always a professional on hand to deal with problems on an "immediate-need-basis".

The center is a home base for all freshmen throughout their first year of college and for all students who have yet to declare their major. During orientation (see Orientation for New Students) freshmen are introduced to the center's staff and are made familiar with the resources there. Once the year begins, every freshman will make several visits to the center, where the staff will review his progress on an individual basis and suggest special help if necessary. All freshmen students find these conversations beneficial, since the staff is able to answer questions that arise during the freshmen year. During the interviews, each student's record is reviewed, discussed, and recommendations for future course selection are shared by the student and the staff.

In cases where a student may be helped by participating in the college's "Enrichment Program" referrals are made by the center's staff. Located in the center are the Reading Laboratory, Mathematics Laboratory, and the Writing Center.

Academic advising is an important part of the college's program. Each student is assigned an academic adviser who is a member of the college faculty or professional staff who meets frequently with the student to discuss program planning. If there are any problems or concerns, the adviser can help the student solve them.

Enrichment Program

An "Enrichment Program" is available to help strengthen those skills most essential to effective learning both in college and throughout life.

The Undergraduate Academic Experience

The program is based on the college's commitment to provide students with every opportunity to build upon strengths they have while correcting any deficiencies. This assistance is provided through specialized courses in English, Mathematics, and Reading, and through resources such as the Reading Laboratory, the Writing Center, and the Mathematics Laboratory. Tutorial assistance is also provided.

Students needing assistance in any of these areas may be referred by the college faculty or staff. A student may also request special help which the college may provide.

Courses—Students may enroll in the following courses through regular registration procedures. Please see the *Introductory College Skills* section of this catalog for complete descriptions of these courses.

***FS 100 Introductory College Skills: Intrusive Advising** — A specialized learning/advising program for freshmen offered by the Academic Advising Center and conducted in a small group setting. Students who wish further information about this course should contact the Academic Advising Center.

***FS 101 Introductory College Skills: Writing** — The course will consist of an intensive review of basic communication skills, chiefly those of reading and writing. Students who wish further information about this course should consult with the chairperson of the English Department or the Academic Advising Center.

***FS 102 Introductory College Skills: Mathematics** — Fundamental principles of algebra and geometry. Students who wish further information about this course should consult with the chairperson of the Department of Mathematics and Computer Science or, the Mathematics Laboratory director or the director of the Academic Advising Center.

**The credit earned in these particular courses may not be used to satisfy General Education Requirements, nor may it be applied toward the minimum number of credits required for graduation in any major.*

Laboratories — Students may enroll in the following laboratory programs by consulting with the directors of the program.

Mathematics Laboratory — The Mathematics Laboratory provides individualized instruction in a laboratory setting with peer tutoring and a variety of resources. Student participation in the Mathematics Laboratory may be voluntary or by referral to Dr. Jean Prendergast of the Mathematics and Computer Science Department.

Reading Laboratory — The college Reading Laboratory is available to all students who wish to utilize the services of the laboratory for the development of their own skills. Students interested in the services of the laboratory may contact the college Reading Laboratory, Maxwell Library.

Writing Laboratory — The Writing Center at Bridgewater State College offers the student an opportunity for individualized instruction in writing. Student participation at the Writing Center may be voluntary or by referral to the director of the Writing Center.

Honors Program

The Honors Program at Bridgewater encourages gifted and highly motivated students to reach their highest potential through critical thinking, scholarship, and research. Small classes and close student-faculty relations provide for the vigorous and thorough exchange of ideas, while the program as a whole attempts to create an atmosphere fostering intellectual, artistic, and academic achievement.

The program does not require students to take on additional coursework beyond the 120 credit hours necessary for graduation; instead, students earn honors credits by taking honors sections of regular courses and/or honors colloquia during their freshman and sophomore years, by completing honors work in certain of their 300 and 400 level courses during their junior and senior years, and by researching and writing an honors thesis in their senior year.

For all honors work completed with a grade of A or B, students receive honors credit on their transcripts, and those who complete the program receive an honors degree—a goal worth serious effort at a time of strong competition for career and graduate opportunities. For further details on the program consult the "Honors

Bridgewater State College

Program" section of this catalog under *Undergraduate Academic Programs*.

Students in all majors are eligible to graduate with honors (*cum laude*, *magna cum laude*, *summa cum laude*) if their grades meet the requirements stipulated for each category; see "Graduation with Honors" section of this catalog under *Undergraduate Academic Policies* for details.

The Dean's List is published by the college at the end of each academic semester.

Internships

Many academic departments at Bridgewater offer students the opportunity for internships. These are usually off-campus in businesses, agencies, schools, hospitals, or other professional settings where students can work side-by-side with experienced professionals, earning academic credit and gaining valuable training and career background.

Many students have found internships extremely valuable for their professional development. The opportunity to gain extensive, practical experience can often help enhance employment prospects after graduation.

Internships are generally available to students in their junior or senior year. This supervised practical experience is explained in detail in the "Internship" section of this catalog under *Undergraduate Academic Programs*.

Exchange and Study Abroad Programs

Bridgewater currently has formal student exchange agreements with Acadia University (Nova Scotia, Canada); Manchester Metropolitan University, Crewe & Alsager Campus in England; and Vladimir Pedagogical Institute (Russia).

In addition, students have the opportunity to study in China; Quebec and Nova Scotia, Canada, through the Quebec/New England Exchange at over a dozen institutions, including Bishop's University, Concordia University, the University of Laval, McGill University, the University of Montreal and the University of Sherbrooke. The Nova Scotia/New England Exchange provides exchange opportunities at thirteen institutions, including Atlantic School of Theology, University

College of Cape Breton, Dalhousie University, University of King's College, Nova Scotia College of Art and Design, Nova Scotia Teachers College, and St. Francis Xavier College. A special three-week, three-credit summer Bridgewater-at-Oxford Program provides students with the opportunity to participate in the distinctive features of the Oxford educational experience. In addition to lectures and course work, the program includes tours to places of interest in the Oxford area.

Students are encouraged to explore these exchange programs and other study abroad programs, especially for their sophomore and junior years. Informational brochures regarding study, work and travel abroad opportunities are available in the International Students Office, the Career Planning and Placement Office and the Maxwell Library.

Directed Study

The college permits students to pursue certain of their interests through Directed Study. Such an undertaking involves independent thinking, hard work, and creativity along with the guidance and help of a faculty member. The end result should be a paper or project accepted by the faculty member working with the student.

For more information please see the "Directed Study" section of this catalog under *Undergraduate Academic Programs*.

Cultural, Social, Athletic, and Recreational Activities

Introduction

The college offers students a full social, cultural, athletic, recreational, and religious life. Art exhibits, lectures, concerts, movies, plays, workshops, and sports events make for an active campus schedule.

Through programs sponsored by the foundation, campus center and other organizations, members of the college community have an opportunity to attend events featuring significant public figures and internationally acclaimed performing artists. Some of the guests who have appeared at the college include the Hartford Ballet, the Canadian Brass, the New York City Opera Company, Bobby McFerrin, Victor Borge and the Julliard String Quartet.

The campus center, art building, and library all feature galleries where interesting exhibits are displayed, and special programs, such as performances by the college Chorale Society or the B.S.C. Dancers are enjoyed by the campus community.

For students who enjoy theatre either as a participant (acting, stage work, or costumes) or as a member of the audience, Bridgewater has much to offer. Major productions are presented by the Ensemble Theatre throughout the year and professional companies perform at the college frequently.

A strong athletic tradition at Bridgewater dates back to the 1850's, and today there are 20 varsity sports and a full range of intramural athletic programs. Forty percent of the student body participates in the intramural program and other enthusiastic supporters can be found on the sidelines.

Students, staff, and alumni keep abreast of events and programs through a variety of campus publications. The student newspaper, *The Comment*, and *Bridgewater Today* focus on news and feature stories highlighting campus life and individual achievements. *Bridgewater Today* also maintains a calendar listing college events. The campus radio station, WBIM, provides up-to-the-minute coverage of events plus a full range of musical and special interest programming.

Bridgewater State College

Campus Center

The Adrian Rondileau Campus Center is the focus on campus for a large variety of cultural, social, educational, and recreational programs. From concerts to lectures, movies to plays, folk singers to art exhibits, and dances to minicourses, the campus center makes a continuing, substantial contribution to the learning environment and enriches the scope of college life.

The campus center is open from early morning to late at night, seven days a week during the academic year, providing 27 types of facilities, including student organization offices, radio station, television studio, study lounges, game room, commuter center, music room, cafeteria, and ballroom.

The campus center board of governors is comprised of 23 members of the college community who work with the director of the campus center and the director of student activities to recommend policies for the use of the complex. The student activities program committee, is comprised of 24 student members who develop, plan, and implement the many events and programs for the campus.

Clubs and Organizations

A number of clubs and organizations have been formed to meet the wide diversity of recreational, social, cultural, political, and service needs of the Bridgewater community.

■ Clubs and organizations with an academic focus include:

Accounting and Finance Club	Mathematics and Computer
American Marketing Association	Science Club
Anthropology Club	National Student Speech
Athletic Training Club	and Hearing Association
Biology and Chemistry Club	Philosophy Club
Children's Physical	Physics Club
Developmental Clinic	Political Science Club
Communications Club	Public Relations
Data Processing	Association
Management Club	Social Work Club
Early Childhood	Society for the Advancement
Education Association	of Management Science
Earth Sciences and Geography	Sociology Club
Club	Student Chapter of the
English Club	American Production and
Future Teacher's Association	Inventory Control Society
Health, Physical Education,	(APICS)
Recreation and Dance Club	Student Council for
History Club	Exceptional Children

■ Several departments invite academically talented students to join nationally recognized honor societies:

Kappa Delta Pi	Phi Alpha
(Education)	(Social Work)
Phi Alpha Theta	Pi Mu Epsilon
(History)	(Mathematics)
Phi Sigma Alpha	Psi Chi
(Political Science)	(Psychology)
	Sigma Gamma Epsilon
	(Earth Science and
	Geography)

■ For students whose interests lie in the area of music, drama, art or debate, a number of organizations may be of interest:

B.S.C. Dancers	Game Club
Chamber Singers	Images Magazine
Chorale Society	Stage Band
College Yearbook	Student Activities Program
Comment (student	Committee
newspaper)	Student Art Guild
Ensemble Theatre	Video Club
Forensic Society	WBIM Radio Station

■ For those athletically inclined, there are, in addition to strong intercollegiate and intramural programs, a variety of activities such as club or recreational swimming, bowling, bicycle trips, ski trips, water polo, karate, flag football, street hockey, soccer, basketball and volleyball which are sponsored by the following organizations:

Adventure in Role Playing Club
Bridgewater Association for
Intramurals, Recreation, and Sports
Gymnastics Club
Shoto-Kan Karate Club
Men's Lacrosse Club
Rugby Club
Men/Women Track Club
Waterpolo Club

Cultural, Social, Athletic, and Recreational Activities

■ *Some special interest clubs serve the needs of different campus populations or serve by working on projects to benefit the college community:*

Afro-American Society
Alpha Eta Rho (co-ed)
Amnesty International
Bible Study Club
Bisexual, Gay and Lesbian
Alliance (BiGALA)
Campus Center Board
of Governors
Circle K International
Class Government
College Republicans
Commuter Association
Crimson Ambassadors
Gamma Phi Beta Sorority
Greek Council
International Club
Low Income Students
MASSPIRG
Older Adult Students
in School (OASIS)
Peer Ministry
Panhellenic Council

Phi Pi Delta Fraternity (co-ed)
Phi Sigma Sigma Sorority
Public Relations Association
Residence Hall Council
Sigma Chi Fraternity
Sigma Pi Fraternity
Sigma Tau Gamma Fraternity
Students Accepting a
Challenge (SAAC)
Student Alumni Relations
Club (SARC)
Students Against Drunk
Driving
Students for Life
Student Government
Association
Students Unified for
Nature (S.U.N)
Tau Alpha Kappa Fraternity
Theta Chi
Theta Phi Alpha Sorority
Women's Center

Religious Life

The campus provides opportunities for formal religious study as well as individual participation in worship, bible study, and purposeful community service. The Catholic Center, Christian Fellowship and Menorah Club contribute to our understanding and appreciation of various religious perspectives.

Varsity Athletics

Bridgewater State College currently fields 20 intercollegiate varsity sports teams. The college is a member of the National Collegiate Athletic Association (NCAA) Division III, the Eastern Collegiate Athletic Conference (ECAC), and the Massachusetts State College Athletic Conference (MASCAC).

Varsity sports currently include:

Baseball	Soccer (men and women)
Basketball (men and women)	Softball
Cheerleading (co-ed)	Swimming (men and women)
Cross-Country (men and women)	Tennis (men and women)
Field Hockey	Track and Field (men and women)
Football	Volleyball (women)
Lacrosse (women)	Wrestling

Please see "Intercollegiate Athletic Eligibility" section under *Undergraduate Academic Policies* for specific information on requirements intercollegiate athletes must meet.

Intramural Program

The intramural program attracts participants from approximately 40% of the student body. Active leagues made up of resident and commuter students, fraternity and sorority members, and representatives of other campus student groups compete each semester.

The intramural program includes the following sports:

Badminton	Street Hockey (men)
Basketball (men and women)	Volleyball (co-ed, men, and women)
Flag Football (men and women)	
Softball (co-ed and men)	

The Intramural Advisory Council, comprised of six students and two advisers makes policy for the program. New representatives are elected/appointed each year. Contact the intramural director at the Kelly Gymnasium for information.

Club Sports Program

Club sports provide opportunities for students who desire a competitor's experience but who do not have the time to become involved in varsity athletics. Club programs include:

Rugby (men and women)
Lacrosse (men)
Water Polo
Karate
Gymnastics

Contact the sport club adviser at the Kelly Gymnasium for information.

Services to Students

Introduction

Throughout a college career, students are faced with numerous options which involve making adjustments, wise decisions, and intelligent plans. One may have questions and concerns about housing, finances, health, full-time work, academic programs, post-college study, or career goals.

These and similar important questions are explored by students working with our staff of dedicated professionals involved in the major areas of student development. A wide range of activities is provided to complement and personalize the academic experience for each student.

The Office of Student Affairs provides specific assistance in areas such as career counseling, off and on-campus housing, health services, social activities, disabled student advocacy, veterans programming, athletics, and international education. A central responsibility of all staff is to be available to provide individual and small group supportive counseling for each student.

In this section of the catalog we introduce you to the key services which are available to students enrolled at Bridgewater State College.

Career Planning and Placement

The services of the Office of Career Planning and Placement, located in the Rondileau Campus Center, are available to all officially enrolled students and alumni. Notices of full-time employment opportunities are maintained and a staff of career counseling professionals is available to discuss career options, offer interest assessment and assist with internships, volunteer opportunities, summer jobs and other career related experiences.

Specifically, the Office of Career Planning and Placement helps students to obtain information about a wide range of career opportunities, and has developed an extensive library of career materials including catalogs from graduate and professional schools and directories on internships, overseas work and major employers. The SIGI-Plus computerized career guidance system is available for use.

All students are encouraged to visit the office, become acquainted with its services, and begin to utilize the resources available early in their college experience. The office is open one evening per week in addition to regularly scheduled day time hours.

Campus Child Care Center

Accredited by the National Academy of Early Childhood Programs, the Child Care Center provides pre-school educational programs for children who are between two years nine months and nine years of age. The center provides opportunities for students to take advantage of college educational programs while providing their children with the best in professional child care at a reasonable cost. The center is open five days a week, from 7:30 a.m. to 5:30 p.m. from September through June when administrative offices are open. Enrollment plans include full and half-day programs. Enrollment preference is given to children of full-time students and children under five years of age. For information and enrollment materials please contact the Campus Child Care Center director at (508) 697-1244.

Counseling Center

The college is concerned with the personal, academic and social adjustment of students. Students are often reminded that the college years are supposed to be "the best years of their lives." Indeed, college life does offer new relationships, experiences, and challenges that can contribute to personal growth and development. For many students, however, these experiences bring with them problems and conflicts that seem confusing and at times overwhelming. The Counseling Center can provide the opportunity to work on personal problems and issues with a trained professional who will care, listen, and be interested.

Help may be secured in a number of areas: recognizing personal wants and needs, realizing the importance of both the self and others, valuing the uniqueness of one's talents and abilities, accepting responsibility for life and choices. The Counseling Center offers individual and group counseling to members of the Bridgewater State College community. Short-term consultation and referral services are also available. During the course of the year the Counseling Center also offers workshops and discussion groups on topics of special interest. Services are provided free of charge and all services are confidential.

Food Services

A variety of food service areas are located throughout the campus for the convenience of both day and evening

students. Resident students and off-campus students may purchase 14- or 19-meal plan tickets which may be used in Tillinghast Hall, Shea/Durgin Hall and early in the evening at the campus center Rathskeller. In addition, students may purchase discount points for use in the campus center cafeteria and other food service areas. Food may be purchased on a cash basis by students, staff and guests in any of the campus food service areas during normal operating hours. At the request of a physician efforts will be made to accommodate special dietary needs. For information on services and the hours of operation please contact the Office of Food Services in Tillinghast Hall.

Health Services

Any fee-paying student, undergraduate or graduate, full- or part-time, is eligible to use Health Services.

By Massachusetts State Law all full-time undergraduate students are required to have a record of a completed physical examination, with current immunization indicated, on file at the Office of Health Services prior to the start of classes. Medical record forms may be obtained from the Office of Health Services.

The Office of Health Services is the medical care center of the college. A broad range of specialty clinics and medical services including routine laboratory procedures are included among the benefits which students derive. Treatment may be received on a walk-in basis or by an appointment. A physician, nurse practitioner and registered nurses are on duty during scheduled hours. Gynecological laboratory and orthopedic services are also available by appointment. All visits to Health Services including physicians appointments are free. The cost of prescriptions and laboratory tests not performed in Health Services must be borne by the student.

Health/Accident and Personal Property Insurance

Effective September 1, 1989, each institution of higher education in the Commonwealth of Massachusetts is required, by law, to ensure that all students enrolled at least 75% of full-time are enrolled in a qualifying student health insurance plan offered by the institution or in another health insurance program with comparable coverage. This requirement was signed into law, chapter 15A, section 3, on April 21, 1988 as part of the Commonwealth's program of Universal Health Insurance coverage.

Bridgewater State College

Failure to comply with the health insurance stipulation, on the preceding page, will result in cancellation of your classes and you will no longer be enrolled as a student at Bridgewater State College.

All students enrolled full-time or part-time (3/4 of full-time credits) are required to participate in this program unless they can certify they have comparable coverage. Students who do not meet the criteria outlined above may not participate in this plan.

The college insurance plan provides 24-hour coverage anywhere in the world during the enrollment period. Undergraduates carrying a minimum of nine credits are eligible to enroll. Graduate students must carry seven credits. When an insured enters the armed forces, the unearned pro rata premium will be refunded to the insured. *Refunds for any other reason, are not available.*

The spouse and/or child(ren) of an insured student may purchase insurance by completing the dependent enrollment form.

While the college does take measures to ensure the safety and protection of personal property, the college is not responsible for the compensation of loss or damage due to fire, theft, water damage, vandalism and so forth. It is advisable to check the extent of current home insurance or to seek coverage through a special policy.

International Student Office

Prospective foreign students are encouraged to contact the college Office of Admissions and the Graduate School (see *Undergraduate Admissions* and *Graduate School* sections of catalog) to begin the application process. The Office of International Students in Boyden Hall is responsible for the on-going orientation of new international students and for providing information relative to immigration, housing, academic support services, employment and other matters of importance. English as a Second Language instruction is provided by the Department of Foreign Languages (see *Department of Foreign Languages* section of this catalog for more information).

Students interested in studying or traveling abroad are encouraged to investigate the opportunities available through the International Student Office. Student educational exchange programs have been established between Bridgewater and a number of colleges and universities in Canada; with Oldenburg University

(Germany); and with Manchester Metropolitan University, Crewe & Alsager campus in England. In addition to these exchange programs there is a three-week summer study program at Oxford University.

Students may also wish to utilize the growing resource library in the Office of Career Planning and Placement in the campus center, where a number of informational brochures on working and traveling abroad are available.

Office of Affirmative Action

This office commits the college to a policy of affirmative action and nondiscrimination in all of its sponsored activities. Affirmative action and equal opportunity are viewed as an integral part of the mission and purpose of the college. The Board of Trustees fully endorses the plan of action set forth in the college affirmative action plan and oversees and monitors its implementation under the direction of the director of Affirmative Action.

Office of Minority Affairs

The Office Of Minority Affairs undertakes a number of initiatives to promote a climate that nourishes racial, ethnic and cultural diversity. Among other things, it develops programs addressing access, process and achievement. This office has adopted an anti-racial harassment policy addressing cultural and racial diversity and assists in all campus and community based activities.

Students with Disabilities

In compliance with section 504 of the Rehabilitation Act of 1973, and the Americans with disabilities legislation, Bridgewater State College is committed to making its facilities, services and programs (academic, social, etc.) accessible to all students.

Through the use of reasonable accommodations, the Office for Students with Disabilities assists students who are learning disabled, mentally challenged and physically challenged in obtaining the services they need to access a quality education. This is done in the following ways: assisting with course registration procedures and accessibility to classrooms; locating readers, notetakers, interpreters, accessible housing and transportation; assisting in acquiring reasonable accommodations from college faculty and staff; and

providing information about the laws, regulations and rights as they pertain to students with disabilities.

All students with disabilities who seek services from this office need to provide proper current documentation of their disabilities and discuss their learning requirements with their instructors well in advance of the academic year so that appropriate assistance and consideration may be given. This office will assist in all reasonably possible ways to provide access to opportunities for a quality educational experience. Students are urged to call or drop by the office if they have any questions, need assistance, or have suggestions.

The student organization, Students Accepting a Challenge, provides peer support for students with disabilities and assists with campus-wide educational activities designed to inform and challenge attitudes.

Transportation

The Bridgewater State College transit system provides no-fare campus shuttle service from 7 a.m. to midnight as well as limited connecting service to Brockton, Monday through Friday, throughout the academic year when classes are in session. The campus shuttle runs approximately every 20 minutes and provides more than 2,700 students with comfortable and reliable transportation around our 195-acre campus, linking residence halls, academic buildings, and learning resources such as the campus center, library and athletic fields each day.

The Bridgewater State College transit system, inaugurated in January, 1984, with the cooperation and assistance of the Brockton Area Transit Authority (BAT), has been a welcome addition to the campus. During the spring of 1987 a van equipped with a wheelchair lift was added to the passenger vehicle fleet, greatly enhancing campus accessibility for students with physical disabilities.

Students commuting between Middleboro, Bridgewater and Boston should contact Bay State Bus Line (Interstate Coach) for rate and schedule information. Commuting students are also urged to utilize the ride board in the campus center to link up with other students from the same area who would like to share rides.

Veterans' Affairs

The Office of Veterans' Affairs provides information on current Veterans Educational Assistance programs, counseling, educational guidance, and assistance in obtaining work-study placements. The office is also responsible for maintaining veterans' benefit records and for submitting necessary documentation for initial enrollment and continuing eligibility benefits.

Those students who may be eligible for educational assistance include students who are enrolled in day or evening classes, either full- or part-time and are veterans of World War II, Korean, Vietnam and post-Vietnam eras; men and women in the Reserves or National Guard; husbands, wives, widows, widowers and children of veterans whose death or permanent and total disabilities were service-connected; service-connected disabled veterans, dependents of servicemen missing in action or prisoners of war for more than 90 days.

For information concerning Veterans' Educational Assistance programs or National Guard and selective reserve programs, please contact Veterans' Affairs, Financial Aid Office, Tillinghast Hall, Bridgewater State College, Bridgewater, MA 02325, or call or visit between the hours of 8 a.m. and 5 p.m., Monday through Friday, (telephone 508-697-1341).

College Events and Special Programs

Introduction

What are the special characteristics of campus life that truly distinguish Bridgewater State College? There are literally hundreds of interesting programs, projects, and events underway at the college throughout each year. This section presents a brief overview of some of these, which together impart a sense of a vibrant campus, an active student body and faculty, and Bridgewater's twin commitment to academic excellence and public service.

On the following pages we are pleased to share with you these selected samples of academic, cultural, and social activities and programs, for they reflect the continuing traditions of which we are most proud.

Special note: The following selected events, projects, and programs are presented in alphabetical order. These are intended to be a representative sampling of the many different activities and programs which are sponsored each year by the students, faculty, staff, and alumni of the college.

Alumni Weekend

An annual highlight of the Bridgewater Alumni Association, Alumni Weekend provides the opportunity for the college's graduates to return to Bridgewater each May. Centered around fellowship, tradition, and recognition, the weekend features reunion class get-togethers and the association's annual meeting and luncheon. Students and alumni alike are recognized at the annual awards ceremony, when scholarships are

distributed to outstanding Bridgewater students, and alumni who have made significant contributions.

Archaeological Excavations

The Department of Sociology and Anthropology conducts a vigorous archaeology program with field excavations of prehistoric and historic sites throughout New England. Excavations are currently in progress in eastern Massachusetts. Both undergraduate and graduate students participate in this field work.

Bridgewater Performing Arts Series

The Bridgewater Performing Arts Series is a project of the Bridgewater State College Foundation and is a self-supporting enterprise receiving no support from the Commonwealth. The foundation is an independent, non-profit charitable trust whose sole purpose is to provide assistance to and promote the general welfare of Bridgewater State College. Assisted by a membership of fifty participants and governed by a twenty-member board, the foundation seeks to promote Bridgewater State College as a resource to the southeastern Massachusetts community and to acquire and administer the contributions necessary to ensure the long-term vitality of Bridgewater State College.

Past Performers in the Performing Arts Series have included Victor Borge, Bobby McFerrin, Pearl Bailey, Martha Graham Dance Company, Hal Holbrook, and many other exciting artists.

College Events and Special Programs

Canadian Studies

Bridgewater State College has one of the oldest Canadian Studies programs in the northeast. The program is interdisciplinary in nature involving the academic Departments of History, Music, Foreign Language, Political Science, Art, Economics, and Earth Science. The college has a reciprocal relationship with Canadian universities in the provinces of Nova Scotia and Quebec. The government of Canada has recognized Bridgewater as an official depository of Canadian government documents because of the college's role in Canadian Studies.

Children's Physical Developmental Clinic

The Children's Physical Developmental Clinic is a unique program for students which fosters professional development and community service. The clinic, which is the only one of its kind in New England, seeks to improve the physical and motor development as well as the self-esteem of 75 disabled children from 42 communities in Massachusetts and Rhode Island.

The clinic is the largest student group on campus with over 100 student clinicians representing 12 majors. The clinic program affords students the opportunity to transfer the theory of their major area of study to a practical setting. The experience enables students to learn more about the techniques and strategies of working with children diagnosed with various disabilities.

In 1985, the clinic was the recipient of the Commonwealth's highest award for public service, the "Manuel Carballo Governor's Award for Excellence in Public Service".

Children's Theatre

Since its founding in 1969, the renowned Children's Theatre of Bridgewater State College has been seen and enjoyed by more than 130,000 area children, most of whom are seeing live theatre for the first time. That, in fact, is the idea behind the Children's Theatre to introduce young people to the thrill and excitement of the stage. The plays are carefully selected (some are original compositions) to capture the interest and imagination of children. The Children's Theatre is one key aspect of an energetic theatre program at the college.

Commencement

Commencement marks the culmination of the academic experience; a colorful event mixing happiness with nostalgia. At commencement each year awards are announced, diplomas presented, and proud family members share in the happiness of the graduates. Two commencement ceremonies are held, one in spring and the second in winter for students who complete their course work during the previous summer or fall sessions.

Convocation

Convocation marks the formal opening of the academic year and takes place in the fall. Faculty, staff, and members of the senior class don academic robes for a colorful procession to the ceremonies. It is customary to invite an outstanding graduate of the college to return to the college to deliver the convocation address.

Family Weekend

Family Weekend is held in the fall each year, for the parents and family members of undergraduate students. A full weekend of activities is planned to give parents and family members an opportunity to meet with members of the staff, attend information seminars and panel discussions, enjoy exhibits and performances and tour the campus.

Hall of Black Achievement

The mission of the Hall of Black Achievement (HOBA) is to discover, detail and disclose the significant achievements of people of color. HOBA will preserve, teach, research and make available for advanced inquiry and public awareness all of its work. This will create new scholarly endeavors, institutional pursuits and most of all, uplift and broaden social conscience, enlighten the unenlightened and make the country a better place to live.

The Mary Hudson Onley Achievement Award (MHOAA), as a part of HOBA, is presented to living individuals who have made significant contributions to the quality of life in Massachusetts, or whose personal or professional achievements merit special recognition.

Bridgewater State College

Homecoming

Homecoming Weekend is a major event each fall, a time when large numbers of alumni and parents join with current students in attending the annual homecoming football game and many other activities which take place beginning on the Friday evening before the game. Concerts, dinners, and other special events highlight the weekend festivities.

Honors' Day

Honors' Day is a significant event as each academic year draws to a close. Usually held on a Sunday in May, with the president of the college presiding, parents and family members are invited to come and participate in this special occasion, when students receive awards and scholarships as recognition for academic achievement and leadership in student life.

Management Science and Technology Council

The Management Science and Technology Council provides a forum for the exchange of information and ideas between representatives of the business community and the administration, faculty, and students of the college concerning majors in Management Science, Mathematics and Computer Science. In addition to the institutional members, the council membership includes leading business and public figures from eastern Massachusetts. The council meets on a periodic basis throughout the academic year.

Martin Luther King Celebration, Jr. Celebration

Each year for the past six years the college has observed the birthday of Dr. Martin Luther King, Jr. with a breakfast and a program. The program involves speakers from the campus and the community who address themes to Dr. King's message of racial harmony and progress for people of all colors.

Minority/Bilingual Student Awareness Day

To help acquaint minority students with educational opportunities at Bridgewater State College, the Office of Affirmative Action/Minority Affairs in cooperation with the Office of Admissions hosts a "Minority/Bilingual Student Awareness Day" each year. Minority students from throughout southeastern Massachusetts are invited to spend a day on campus meeting with students and faculty and participating in special information sessions to learn more about Bridgewater.

Orientation for New Students

Orientation for freshmen and transfer students is designed to help familiarize new students with the campus community. The orientation program includes meetings with students and faculty, recreational activities, academic advising sessions, tours, and other activities. Parents are also invited to participate in summer Orientation programs, as we consider them an important part of our community. The orientation program has received enthusiastic reviews from new students, who feel it makes them comfortable with the college prior to the start of classes, and the adjustment to a new setting is, therefore, much easier.



Housing

Residential Living

Since 30% of our students live on the campus, Bridgewater State College has a commitment to make residence halls much more than just a place to live while going to school. Getting a college education here includes not only classroom learning, but also becoming a part of a community. Residence halls at Bridgewater may be men's, women's, or co-educational halls and offer singles, doubles, triples, quadruples and apartments. No family housing units are available. Approximately 1,800 students live on campus. The seven residence halls, and one student apartment complex, comprise the on-campus housing facilities:

- **Shea Hall** is named for former dean of students, Dr. Ellen M. Shea, and **Durgin Hall** is named for former professor Dr. George Durgin. Each accommodates 362 male and female students. The residence hall also has a dining hall for resident students.
- **Scott Hall** is named for former President Zenos Scott, and houses 160 male residents.
- **Woodward Hall**, named for Eliza Bond Woodward, class of 1857, who was the first female member of the school's faculty (1857-1887), accommodates 255 women.
- **Pope Hall**, named for former dean of women, S. Elizabeth Pope, houses 172 women.

- **The Great Hill Student Apartments**, located near Shea/Durgin Hall, house 206 male and female students. Each apartment has four single rooms and one double/triple room, a common living area, and complete kitchen facilities.
- **DiNardo Hall** is named for Dr. V. James DiNardo, former executive vice president of the college and **Miles Hall** is named for Frankland W. L. Miles, former chairman of the board of trustees of the Massachusetts State College Building Authority. Each hall houses approximately 200 male and female students in two-bedroom suites with a shared common living room.

At present, applications for residence hall placement exceed the openings generally available, and assignments are based on the total evaluation of the candidate, including the distance from one's permanent place of residence and academic standing. Students who are not immediately granted residence are placed on a waiting list. Further placements are made from this list as space becomes available. A certain number of spaces each year are reserved for freshmen and transfer students. Admission to housing is granted through the Office of Admissions as part of the admissions decision.

Each applicant must pay a room reservation deposit following notification of acceptance to a residence hall and sign a housing contract. This deposit will be deducted from the total second semester residence hall fee of students who attend and will be forfeited by those who do not enroll. Students who enroll for residence and then decide to commute will also forfeit their deposit.

Bridgewater State College

Students who are assigned to residences are required to pay a \$50.00 "Residence Hall Security Deposit". Damages specifically attributed to an individual student or an identifiable group of students are billed at the time of the assessment of damages, not deducted from the security deposit.

Off-Campus Housing

It should be noted that in many instances, the college is not able to house every student who wishes to live on campus. Therefore, some students elect to live off-campus. Accommodations off-campus include apartments, houses, or rooms within private homes in close proximity to the college, thus allowing students to make full use of campus facilities such as dining halls (off-campus students may purchase the same meal plan as resident students), the library, gymnasium, and the campus center.

The Office of Resident Life and Housing and the Office of Student Affairs maintain a list of available off-campus housing, and assist students seeking such accommodations.

A large number of Bridgewater students who live in communities near the college commute from their homes to campus. Campus parking facilities are available.

Among the services offered specifically for commuting students is information and assistance in forming carpools. Commuting students are actively involved in campus life to the same degree that resident students are, and assume leadership roles in many campus organizations, especially the Commuter Association.



Undergraduate Admissions

For information about admission to graduate programs, please consult the *Graduate School* section of this catalog.

Bridgewater State College seeks to admit students who give evidence of intellectual capacity, motivation, character, and who have a record of scholastic achievement. An effort is made to attract candidates of diverse academic, economic, racial, religious, and geographic backgrounds. The admission requirements and procedures are designed to assist the college to select a freshman class from those applicants who can benefit from the educational opportunities at Bridgewater State College.

Bridgewater State College does not discriminate on the basis of race, sex, sexual orientation, color, religion, age, or national or ethnic origin. In addition, no otherwise qualified handicapped applicant shall, solely by reason of handicap, be excluded from admission.

Freshman Admissions Requirements

Application Form

The application form, aside from collecting biographical data, requests information concerning the academic and extracurricular interests of the candidate. The personal statement allows the college the opportunity to become more personally acquainted with the applicant.

High School Record

The primary emphasis in evaluating a candidate for admission is placed on the overall performance of the applicant in secondary school. The strength of the applicant's curriculum, grades, and class rank as well as the level of competition in the applicant's high school are taken into consideration.

Candidates for admission should complete a secondary school course of study, or equivalent preparation, which is compatible with the goals and objectives of the college. The secondary program should include the following college preparatory subjects:

English (a)	4 units
Mathematics (b)	3 units
Science (c)	2 units
History/Social Science (d)	2 units
Foreign Language (e)	2 units
Elective Units (f)	3 units
Related Courses (g)	4 units

- (a) These must be college preparatory courses in composition and literature which include the development of reading, writing and comprehension skills.
- (b) These should be college preparatory courses in such subjects as algebra, geometry, trigonometry, elementary functions and mathematical analysis. A fourth year of mathematics, usually calculus, is strongly recommended for students who plan to enter fields such as computer science, management science, mathematics, pre-engineering or the sciences.

Bridgewater State College

- (c) These college preparatory courses should include laboratory work.
- (d) This requirement should include one year of United States history and government.
- (e) Students are encouraged to elect a third year of foreign language study.
- (f) Students should choose from additional college preparatory courses in English, mathematics, computer science, foreign language, natural and physical science, visual and performing arts, and humanities.
- (g) Students are encouraged to elect courses that are consistent with their personal, educational and career goals. These courses may include, but are certainly not limited to, such offerings as computer science, business, communications, psychology and sociology.

Students graduating from vocational-technical high schools will be considered according to the provisions of the Board of Regents' Admissions Standards dated January 10, 1984.

The college is also careful to consider the characteristics of each candidate's school and community and sets no limit on the number of applicants admitted from an individual secondary school.

Bridgewater State College supports the efforts of secondary school officials and governing bodies to have their schools achieve regional accredited status to provide a reliable assurance of the quality of educational preparation of its applicants for admission.

Standardized Test Scores

Candidates for admission to the freshman class must take the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board (the only exceptions are footnoted below**). In addition, candidates should submit the results of the College Board's Student Descriptive Questionnaire (SDQ).

For evaluation according to the provisions of Chapter 344, students with learning disabilities are expected to submit verification from their guidance office. More specific documentation may be required for academic advising and special services when students enroll.

***Chapter 344, Section 19 of the 1983 Acts and Resolves of the Commonwealth of Massachusetts states that: "No resident of the Commonwealth who has been diagnosed as being developmentally disabled, including but not limited to, having dyslexia or other specific language disabilities, by any*

evaluation procedure prescribed by chapter seventy-one B, or equivalent testing, shall be required to take any standardized college entrance aptitude test to gain admittance to any public institution of higher education in the Commonwealth. Admission shall be determined by all other relevant factors excluding standardized achievement testing."

Students should take the Scholastic Aptitude Test (SAT) no later than January of their senior year. Candidates submitting scores taken during their junior year should have those scores and Student Descriptive Questionnaire (SDQ) reports forwarded during the academic year in which application is made to the college from the College Entrance Examination Board.

Candidates who graduated from high school three or more years prior to their planned entrance date are exempt from the SAT requirement.

Application for registration for the SAT, as well as score report requests, is made directly to the College Entrance Examination Board, Box 592, Princeton, New Jersey 08540. The college code number for designating score reports to be sent to Bridgewater State College is 3517.

Extracurricular Record

Since Bridgewater seeks students who will contribute to the college in a variety of ways, other factors are considered in the admissions decision. These include demonstrated leadership, participation in extracurricular activities, motivation, maturity, and special aptitudes and talents. Because of this, letters of recommendation, and any additional supporting information a candidate wishes to submit, are welcomed and encouraged.

Interviews are not required. However, any student wishing a personal interview may contact the Office of Admissions for an appointment.

Commencing with the freshman class entering in September, 1984, the Board of Regents of Higher Education and the Bridgewater State College Board of Trustees established an Admissions Eligibility Index for students entering the Commonwealth's state colleges and universities directly from high school. This eligibility index is a sliding scale which relates scores on the Scholastic Aptitude Test with weighted high school class rank. The following groups are exempt from the Bridgewater State College Admissions Eligibility Index.

1. Candidates who have demonstrated to the Committee on Admissions non-quantitative factor(s) such as special aptitude, talent, initiative and creativity.

Undergraduate Admissions

2. Students out of high school for three years or more. These students are best evaluated by certain non-quantitative criteria such as maturity and motivation.
3. Students whose special needs have been identified by means of assessments prescribed in Chapter 766. This group is exempt from submitting the results of the Scholastic Aptitude Test (SAT).
4. Educationally disadvantaged students. Typically these students include those who may be culturally different with a primary language other than English, minorities, economically disadvantaged, from rural districts with limited course offerings, or from large urban school districts which are experiencing a net out migration of students. For these students, non-quantitative factors are especially important in evaluations.
5. Students transferring to Bridgewater State College with an associate's degree from a Massachusetts community college.
6. Students transferring to Bridgewater State College with at least 12 semester hours of advanced standing and a grade point average of at least 2.0 on a four point scale.

Note: These eligibility requirements refer only to eligibility for admission to Bridgewater State College and do not guarantee admission.

Decision and Notification Dates

Early Action Program

Freshman candidates may apply under the Early Action Program. Candidates need to have taken the SAT on or before the November test date and will need to have their application complete and transcripts on file in the Office of Admissions by November 15th.

Early Action applicants are notified of the college's decision on their applications by mid-December. The college either (1) offers admission, (2) denies admission, or (3) defers admission and reviews the application again during the Regular Decision Program in the spring. A student offered admission under the Early Action Program has until the May 1st candidates reply date to respond to the college's offer.

Regular Decision

Freshman applicants for the fall semester must submit their completed application by March 1. Candidates are

notified of the Admissions Committee's decision by April 15.

A limited number of freshmen candidates are accepted for the spring semester each year. The application deadline is December 1 and decisions are mailed by January 5.

Transfer Admissions

Bridgewater State College, with its strong emphasis on transfer student programs, welcomes qualified transfer students and encourages those students to apply.

Transfer applicants will be evaluated on the basis of their previous college work and must supply a transcript from each college attended. Transfer applicants with less than 12 semester hours of transferable credit must, in addition, submit to the college a high school transcript and the results of the SAT.

Transfer applications should be filed by April 1 for September admission or by December 1 for January admission. To be eligible for admission, a student should have a grade point average of at least 2.0 on a four-point scale. Please note that this is merely a minimum grade point average and by no means guarantees admission.

Whenever possible, degree credit will be granted for course work completed at other accredited institutions of higher education. A grade of C is necessary in a course for the transfer of credit. Candidates may be required to submit a catalog from the previous college(s). Courses which do not fit the degree program may be counted as fulfilling the free elective requirements of the four-year curriculum. The transfer student will be required to fulfill the same degree requirements as any other student. However, a student who has completed the general education requirements of another Massachusetts State College prior to transferring, will not be obligated to meet additional or different general education requirements at Bridgewater State College. At least one-half of the required courses in the major field (and in the minor field) must be completed at this college.

Honor courses, programs of independent study, Advanced Placement, College Level Examination Program (CLEP) and advanced standing credit earned at other institutions of higher education will be accepted at Bridgewater. Official documentation is required.

Bridgewater State College

Most transfer students complete at least two academic years at the college, however, if all requirements are met satisfactorily, the college will grant a baccalaureate degree with a minimum of one full year of academic work taken at the college provided that all other requirements for graduation have been met.

A student transferring from an accredited two-year institution is entitled to transfer for credit toward the bachelor's degree no more than the two years of credit which constitute the requirements of the Associate's Degree Program taken as a unit. Please note that no more than 69 semester hours may be transferred from any two-year institution.

The number of transfers accepted by Bridgewater will be determined by vacancies in the degree programs and the number of applicants determined eligible under the above guidelines. Among qualified and eligible transfer applicants, priority in admissions will be given to transfer students in good standing from within Massachusetts public higher education.

Note: The college reserves the right to close admissions at any time.

Commonwealth Transfer Compact

For students transferring from Massachusetts community colleges to Bridgewater State College (Effective January, 1990)

I. Requirements for Transfer Compact Status

A student shall be eligible for transfer compact status if he or she has met the following requirements:

- Completed an associate's degree with a minimum of 60 hours exclusive of developmental coursework.
- Achieved a cumulative grade point average of not less than 2.0 (in a 4.0 system) at the community college awarding the degree. This is merely a minimum grade point average and by no means guarantees admission.
- Completed the following minimum general education core, exclusive of developmental coursework:

English Composition/Writing	6 credit hours
Behavioral and Social Science	9 credit hours
Humanities and Fine Arts	9 credit hours
Natural or Physical Science	8 credit hours
Mathematics	3 credit hours

The community college from which the student is applying is responsible for identifying on the transcript of the candidate that the student has fulfilled the compact specifications.

II. Credits to be Transferred

The 35 credits in general education courses specified in section I will be applied toward the fulfillment of the Bridgewater State College general education requirements.

A minimum of 25 additional credits will be accepted as transfer credits. These credits may be transferred as free electives, toward any additional general education requirements, toward the student's major, or any combination, as Bridgewater State College deems appropriate.

Only college-level course credits consistent with the recommended standards set forth in the *Undergraduate Experience* publication are included under this compact. Credits awarded by the sending institution through CLEP, challenge examinations, and other life experience evaluations for course credit may be included when the community college certifies that a student qualifies under this compact.

III. Credits Beyond the Associate's Degree

To complete the baccalaureate degree, a student who transfers under this compact may be required to take no more than 68 additional credits unless:

- the student changes his or her program upon entering Bridgewater State College, or
- the combination of additional general education requirements, if any, and the requirements of the student's major at the receiving institution total more than 68 credits.

Under these circumstances, transfer students will be subject to the same requirements as students who began their undergraduate education at Bridgewater State College.

IV. Admission to Competitive Majors or Programs

If because of space or fiscal limitations the receiving institution does not admit all qualified applicants to a given major or program, the receiving institution will use the same criteria for applicants who are transfer students under this compact as it does for its native students.

V. Student Appeals

A student who believes that the provisions of this compact have not been applied fairly has the right to appeal.

Initially, differences of interpretation regarding the award of transfer credit shall be resolved between the student and the institution to which he is transferring. If a difference remains unresolved, the student shall present his evaluation of the situation to the institution from which the student is transferring. Representatives from the two institutions shall then have the opportunity to resolve the differences.

Absent a satisfactory resolution, differences of interpretation may be presented to the State-Wide Transfer Coordinating Committee.

Readmission

Students who withdrew from Bridgewater State College in good standing, and who wish to be reinstated, must file an application for re-enrollment with the Office of the Registrar. This process must be completed by November 1 for the spring semester and by May 1 for the fall semester. Because of enrollment constraints, students who submit application after the November 1 and May 1 deadlines cannot be guaranteed reinstatement for the subsequent semester.

All students separated from the college for academic reasons must file the official application form with the Office of Admissions by the dates listed above. It is recommended that students in this category present evidence of the successful completion of at least 12-15 semester hours of collegiate study at another institution of higher education. Transfer credit will be awarded according to established policy. Any undergraduate, matriculated student who is academically dismissed twice can only apply for readmission after a three year period.

Special Students

The college admits to the day session on a space available basis, a number of non-degree students as either full or part-time students. Students seeking admission in this category should contact the Office of Admissions for additional information.

Special Admissions Programs

PROGRESS

The Program for the Recruitment and Retention of Special Students (PROGRESS) was established to admit and provide support services to students from a minority group and/or disadvantaged background who possess both the motivation and potential necessary to achieve a college degree.

The Scholastic Aptitude Test (SAT) should be taken as it is used to assist in the placement and advising of the student. The high school performance of students applying through PROGRESS will be judged on the basis of identifiable achievement patterns over the high school experience rather than on class standing or rank.

Letters of recommendation from guidance counselors, teachers, and in some cases community leaders, are of great assistance in evaluating an applicant's ability to do college-level work.

Each student admitted through PROGRESS is assigned an academic adviser and will be encouraged to carry courses and course loads suitable to individual needs.

Tutorial services are available for all courses. The courses taken by PROGRESS students are the same as those taken by all students at Bridgewater. PROGRESS students must meet the same degree requirements for graduation as do all other students at the college.

Financial assistance is available through the financial aid office.

OUTREACH

The OUTREACH Program at Bridgewater State College was established in 1978 to assist adults who are beginning their college experience for the first time or are returning to school after a period of absence. From the initial inquiry about entering the college through graduation, the OUTREACH office is the primary contact source for all adults on campus.

Bridgewater State College

During the adult student's educational career the OUTREACH program provides academic advising and academic program development, initiates programs and policies to help the adult learner enjoy success, serves as a liaison for students with faculty and administration when appropriate and is the primary agent in assisting adults with all college concerns.

International Admissions

Foreign students who wish to apply for admission to the college should address a letter of inquiry to the dean of Admissions indicating their educational background and intended area of study. Eligible candidates will be mailed a special foreign student admission application and asked to submit official transcripts and credentials. Students for whom English is a second language will be required to submit an official copy of their results from the "Test of English as a Foreign Language" (TOEFL). International students should begin the application procedure no less than nine months in advance of the expected date of admission.

Please see the *Services to Students* section of this catalog for information on the international student office and other services available for international students.

New England Regional Student Program

Bridgewater State College participates in the New England Regional Student Program. The program is administered by the New England Board of Higher Education and is designed to permit qualified New England residents to study at the in-state tuition rate plus surcharge tuition in certain programs at Bridgewater State College.

The program's purpose is to expand higher education opportunities for New England residents by making available on an equal basis those courses not commonly offered at every institution.

Information about the program can be obtained from the Bridgewater State College Admissions Office, from any guidance counselor, or from the Higher Education Information Center, Boston Public Library, 666 Boylston Street, Boston, MA 02116 (617) 536-0200 or 1-800-442-1171.

Health

All candidates, regardless of the intended area of study, are required to have a health examination before entrance. Information concerning such examinations is forwarded to prospective students after notification of acceptance. Every student must submit to the Health Service a completed Student Health History and Immunization Report Form. Documented proof of immunization against measles, mumps, rubella, tetanus and diphtheria is a mandatory part of that history. In addition, the candidate, if a teacher education program is the intended area of study, must be in good physical and mental health, free from disease, infirmity, or other defect which would render the candidate unfit for public school teaching.

Advanced Standing

Advanced standing with college credit and reduction of distributions of the college requirements is granted entering students who have demonstrated college-level proficiency through established procedures.

Advanced Placement Program

The college participates in the College Entrance Examination Board's Advanced Placement Program, through which secondary schools deliberately prepare able, interested students for advanced work at college in the following disciplines: American history, art, biology, chemistry, English, European history, French, German, Latin, mathematics, music, physics, Spanish, computer science, economics, government and politics. Scores of 3 or above are considered satisfactory by the college and credit is awarded upon receipt of official documentation from the College Entrance Examination Board.

Second Degree Option

On a limited basis, students who have previously earned a bachelor's degree may be eligible to pursue a second undergraduate degree at Bridgewater State College. Interested students are advised to contact the Office of Admissions for further information.

Undergraduate Admissions

College-Level Examination Program (CLEP)

Bridgewater State College encourages able students to seek advanced standing through one or more of the CLEP examinations described below. Credit is awarded for scores at the 50th percentile or above.

CLEP credit may not be awarded if equivalent course work has been completed either prior to, or later than, the comparable CLEP examination. It is the student's responsibility to consult the current Bridgewater State College catalog for area or course equivalent distribution of CLEP credits.

Students may arrange to take the CLEP Examination at any of the national test centers, including Bridgewater State College. Those students interested in taking the exams at Bridgewater should contact the Office of Admissions.

There are two types of CLEP (College-Level Examination Program) examinations: the General Examinations and the Subject Examinations. Both measure factual knowledge and understanding, as well as the ability to see relationships and apply basic principles to new problems. The examinations are not based on courses given at Bridgewater State College but on typical courses in a variety of colleges throughout the country.

General Examinations

The college requires all students to complete some study in certain fields that are deemed important for everyone, regardless of special interests or occupational goals. Such required study is called "General Education." The CLEP General Examinations provide a way to show that you have acquired some general education; the equivalent of what is given in required freshman and sophomore courses at the college.

There are five General Examinations which can be applied toward the General Education Requirements at Bridgewater State as follows:

General Examinations	Credit Allowed	Area of Course Equivalent
English Composition*	3	Writing I (EN 101)
English Composition with essay	6	Writing I and II (EN 101, 102)
Mathematics	6	Mathematics (MA 100, 105)
Natural Sciences (Biology/Physical)	6	Natural Sciences (BI 102, Physical Science elective)
Humanities (Fine Arts/Literature)	6	Humanities & Creative Arts (AH 101, EN 221)
Social Sciences/History	6	Social Sciences

*Bridgewater requires a supplementary essay to be taken at the college.



Bridgewater State College

Subject Examinations

The subject examinations now offered are comparable to the final or end-of-course examinations in particular undergraduate courses. A person who has learned the subject through other means such as independent study can probably earn satisfactory scores on the corresponding CLEP examination. The following subject examinations are offered:

Composition and Credit Allowed Literature	Principles of Macroeconomics (EC 102) 3
American Literature (EN 231, 232) 6	Introductory Sociology (SO 102) 3
Analysis and Interpretation of Literature 3	Western Civilization I: Ancient Near East to 1648 (HI 111) 3
English Literature (EN 221, 222) 6	Western Civilization II: 1648 to the Present (HI 112) 3
Freshman English* 6	
Foreign Languages	Science and Mathematics
College French —	Calculus with Elementary Functions (MA 141, MA 142) 6
Levels 1 & 2† (LF 101, 102, 151, 152) 3 to 12	College Algebra 3
College German —	Trigonometry 3
Levels 1 & 2† (LG 101, 102, 151, 152) 3 to 12	College Algebra — Trigonometry (MA 100) 3
College Spanish —	General Biology (BI 100, BI 102) 6
Levels 1 & 2† (LS 101, 102, 151, 152) 3 to 12	General Chemistry (CH 131, CH 132) 6
Behavioral Sciences, Social Sciences, and History	Business
American Government (PO 172) 3	Computers and Data Processing 3
American History I: Early Colonizations to 1877 (HI 221) 3	Introduction to Management (MG 130) 3
American History II: 1865 to the Present (HI 222) 3	Introductory Accounting (AC 240, 241) 3
General Psychology (PY 100) 3	Introductory Business Law (MG 301) 3
Human Growth and Development (PY 224) 3	Introductory Marketing (MG 200) 3
Principles of Macroeconomics (EC 101) 3	

*Bridgewater requires a supplementary essay to be taken at the college.

†Credit decisions are adjusted on the basis of total score in relation to prior years of study.



Tuition and Fees

Application and Advance Payment Fees

A nonrefundable undergraduate application and processing fee of \$10.00 is required of all in-state applicants and \$40.00 for out-of-state applicants. Upon acceptance, a nonrefundable advance payment of \$50.00 must be made. This advance payment is credited against tuition when the student enters the college. A \$50.00 orientation fee is also required of all admitted students in advance. Students accepted as residence hall students remit an additional \$50.00 housing deposit.

Semester Bill: Students are billed twice a year, prior to the start of each semester. Bills are sent to students at their permanent addresses. Payment **must** be made prior to the due date which will be specified on the bill.

- A. Students who have received an award letter from the Bridgewater State College Office of Financial Aid may claim that amount of the award that is specifically designated for the semester. The amount must be indicated on the bill, which must be returned by the due date.
- B. Students wishing to claim credit for financial assistance from sources other than from the Bridgewater State College Office of Financial Aid (outside scholarships, waivers, loans, etc.) must do so by indicating the amount of the assistance on the bill. Official documentation verifying the assistance must be enclosed with the bill, which must be returned by the due date.
- C. MASTERCARD or VISA may be used for any payment, either in full or in part.

All charges are subject to change.
New charges will take effect in July 1993.

Tuition and Fees

Tuition and fees are payable by the mail due date. Students who register at walk-in registration must pay all tuition and fee charges in full at the time of registration. Payment must be by check or money order (payable to *Bridgewater State College*) or by MasterCard or VISA. The following is the tuition and fee schedule. *It should be noted that this schedule is subject to change.*

Semester Tuition and Fees

Massachusetts residents - Undergraduate Credit

Tuition per credit	\$58.67
1st 12 Semester Hours ONLY (\$704.00 max.)	
Fees per credit	\$65.50
1st 15 Semester Hours ONLY (\$982.00 max.)	

Massachusetts residents - Graduate Credit

Tuition per credit	\$73.46
1st 12 Semester Hours ONLY (\$881.50 max.)	
Fees per credit	\$65.50
1st 15 Semester Hours ONLY (\$982.50 max.)	

Non-Massachusetts residents - Undergraduate Credit

Tuition per credit	\$230.92
1st 12 Semester Hours ONLY (\$2,771.00 max.)	
Fees per credit	\$65.50
1st 15 Semester Hours ONLY (\$982.50 max.)	

Non-Massachusetts residents - Graduate Credit

Tuition per credit	\$230.92
1st 12 Semester Hours ONLY (\$2,771.00 max.)	
Fees per credit	\$65.50
1st 15 Semester Hours ONLY (\$982.50 max.)	

Bridgewater State College

Tuition and ½ fees are not charged to any person 60 years of age or older. The person must pay ½ fees and bring proof of age to registrar's office to be eligible.

SGA (Student Government Association)

This fee is charged to all matriculated undergraduate students attending courses that begin before 4 p.m.

Less than 12 semester hours	\$12.00
12 semester hours or more	\$24.00

Other Fees

Residence Hall Security Deposit	\$50.00
Late Registration Fee (nonrefundable)	\$25.00
Health Insurance Fee (Waivable)	

Hospitalization/Major Medical coverage for all students carrying nine credits or more is required by Massachusetts state law. A Student Accident and Sickness Brochure can be obtained from the Office of the Registrar (508) 697-1259 or the Office of Health Services (508) 697-1252. If you are covered under a similar plan and wish to waive the coverage, you must complete the waiver card and return it to the Office of Health Services prior to payment of your bill. Failure to do so will leave an outstanding balance due on your bill.

One Semester Only	\$ 324.00
Full Year	\$ 555.00

Transcript Charge (per copy with 2-5 working days to process)	\$ 2.00
On the Spot Transcript Charge	\$ 5.00
MASSPIRG(Optional/Waivable) Fee	\$ 5.00

Semester Resident Hall and Dining Charges

Room

Traditional Resident (Pope, Scott, Woodward, Shea/Durgin Halls)	\$1,113.00
Student Apartments	\$1,223.00
New Residence Hall (DiNardo/Miles)	\$1,248.00

Dining

14-Meal	\$ 803.00
19-Meal	\$ 825.00

Refund Policy

APPLICABILITY

The refund policy applies to all full-time and part-time students enrolled in regularly scheduled classes at Bridgewater State College. This policy applies to all tuition, room, board, fees and other assessed charges (except housing deposit and application fees when applicable).

This is the official refund policy of Bridgewater State College. However, under a mandate from the federal government, a separate refund policy, herein known as the Refund Policy for First Time Attendees/First Time on Financial Aid, applies to those students enrolled at Bridgewater State College for the first time who also receive financial aid.

POLICY

- All *undergraduate matriculated* (degree seeking) students who **withdraw from school** must communicate that withdrawal in writing through the Academic Advising Center.
- All *graduate matriculated* (degree seeking) students who **withdraw from school** must communicate that withdrawal in writing through the Graduate School.
- All **withdrawals from courses** must be communicated, by the student and in writing, through the Office of the Registrar.
- Prior to the first day of school (official opening) a student receives a refund of 100% minus an administrative fee of \$100.
- Withdrawal before the beginning of the second week of school 90%
- Withdrawal from the **second week** but before the beginning of the third week 70%
- Withdrawal from the **third week** but before the beginning of the fourth week 50%
- *There is no refund after the third week.*

Withdrawals from SUMMER SESSION courses are pro-rated on a basis of class meetings rather than weeks.

IMPLEMENTATION

This policy becomes effective September 1, 1993.

Refund Policy for First Time Attendees/ First Time on Financial Aid

APPLICABILITY

The refund policy applies to all students enrolled in regularly scheduled classes at Bridgewater State College for the first time and who are receiving financial aid. This policy applies to all tuition, room, board, fees and other assessed charges (except housing deposit and application fees when applicable).

POLICY

- All *undergraduate matriculated* (degree seeking) students who **withdraw from school** must communicate that withdrawal in writing through the Academic Advising Center.
- All *graduate matriculated* (degree seeking) students who **withdraw from school** must communicate that withdrawal in writing through the Graduate School.
- All **withdrawals from courses** must be communicated, by the student and in writing, through the Office of the Registrar.
- Prior to the first day of school opening a student receives a refund of 100% minus an administrative fee of \$100.
- Withdrawal before the beginning of the second week of school 90%
- Withdrawal from the **second week** but before the beginning of the third week 80%
- Withdrawal from the **third week** but before the beginning of the fourth week 80%
- Withdrawal from the **fourth week** but before the beginning of the fifth week 70%
- Withdrawal from the **fifth week** but before the beginning of the sixth week 60%
- Withdrawal from the **sixth week** but before the beginning of the seventh week 60%
- Withdrawal from the **seventh week** but before the beginning of the eighth week 50%
- Withdrawal from the **eighth week** but before the beginning of the ninth week 40%
- Withdrawal from the **ninth week** but before the beginning of the tenth week 40%

IMPLEMENTATION

This policy becomes effective September 1, 1993.

Financial Aid

The mission of the financial aid office at Bridgewater State College is to assist students and parents in financing their pursuit for higher education. It is the financial aid office's main goal to ensure access for all who desire an education.

Financial aid award packages may be comprised of a combination of resources such as grant, scholarship, tuition reduction and self help programs like the Federal Family Educational Loan Program and Federal College Work Study Program. The packaging of an award offer is always dependent on the availability of funds from the state and federal governments. Awarding of funds is based on the "need" determined from the analysis derived from the Free Federal Application for Federal Student Aid (FAFSA).

Simply stated, need is the difference between the total expenses of attending Bridgewater State College (including, not only tuition and fees, but also estimated costs of books, room, board, transportation and personal expenses) and the estimated family contribution obtained from the FAFSA analysis. For example:

$$\begin{array}{r} \text{TOTAL EXPENSES} \\ - \text{FAMILY CONTRIBUTION} \\ \hline = \text{FINANCIAL AID} \end{array}$$

All students who wish to participate in federal, state or campus based financial aid programs must file a FAFSA. FAFSAs may be obtained from a high school guidance office or from the financial aid office at Bridgewater State College. It is anticipated that the processing of the FAFSA by the department of education may take up to six weeks. The financial aid office encourages students and families to file as early as possible. Upon application for admission to the college the financial aid office will send the applicant a Bridgewater Financial Aid Application that must be accompanied by the federal tax returns of both the student and parent from the previous tax year.

To receive the optimum level of consideration for all financial aid program eligibility the student should file the FAFSA with Federal Student Aid Programs by March 1, 1994 (not postmarked) and the Bridgewater State College application with attached federal tax returns must be received by April 15, 1993 (not postmarked). Applications are accepted after these dates, but awards will be made on a funds available basis. Applications for students attending the spring semester are accepted on a rolling basis.

Students must reapply for financial aid each year they attend the college. The same application procedures will apply. Although the amount and type of aid offered may change due to funding available to the college and to the dictates of program guidelines, applicants will continue to be eligible as long as financial need is demonstrated and the student maintains satisfactory academic progress.

1993-1994
Bridgewater State College

FINANCIAL AID PROGRAM SUMMARY

	RESIDENCY STATUS	ENROLLMENT LEVEL	MATRICULATION REQUIREMENTS	FINANCIAL ELIGIBILITY	GENERAL APPLICATION PROCEDURES*	1993-94 FILING PRIORITY DATE*
FEDERAL PELL GRANTS	NEED NOT BE MASS RESIDENT	MUST BE A MATRICULATED STUDENT	MUST BE IN UNDERGRADUATE DEGREE OR CERTIFICATE PROGRAM	MUST SHOW ELIGIBILITY ACCORDING TO FAESA NEED ANALYSIS	SUBMIT FAESA, B.S.C. APPLICATION FORM, AND APPROPRIATE 1040*	MAY 1, 1994
FEDERAL COLLEGE WORK STUDY	NEED NOT BE MASS RESIDENT	MUST BE AT LEAST HALF-TIME	MUST BE IN UNDERGRADUATE OR GRADUATE DEGREE PROGRAM	MUST SHOW NEED ACCORDING TO FAESA NEED ANALYSIS	SUBMIT FAESA, B.S.C. APPLICATION FORM, AND APPROPRIATE 1040*	MARCH 1, 1993
FEDERAL PERKINS STUDENT LOAN (5% INTEREST)	NEED NOT BE MASS RESIDENT	MUST BE AT LEAST HALF-TIME	MUST BE IN UNDERGRADUATE OR GRADUATE DEGREE PROGRAM	MUST SHOW NEED ACCORDING TO FAESA NEED ANALYSIS	SUBMIT FAESA, B.S.C. APPLICATION FORM, AND APPROPRIATE 1040*	MARCH 1, 1993
B.S.C. TUITION WAIVER	MUST BE MASS RESIDENT	MUST BE FULL-TIME	MUST BE IN UNDERGRADUATE DEGREE PROGRAM IN DAY SCHOOL	MUST SHOW NEED ACCORDING TO FAESA NEED ANALYSIS	SUBMIT FAESA, B.S.C. APPLICATION FORM, AND APPROPRIATE 1040*	MARCH 1, 1993
FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT	NEED NOT BE MASS RESIDENT	MUST BE AT LEAST HALF-TIME	MUST BE IN UNDERGRADUATE DEGREE PROGRAM	MUST SHOW NEED ACCORDING TO FAESA NEED ANALYSIS	SUBMIT FAESA, B.S.C. APPLICATION FORM, AND APPROPRIATE 1040*	MARCH 1, 1993
B.S.C. FEE GRANT	NEED NOT BE MASS RESIDENT	MUST BE AT LEAST HALF-TIME	MUST BE IN UNDERGRADUATE OR GRADUATE DEGREE PROGRAM OR CERTIFICATE PROGRAM	MUST SHOW NEED ACCORDING TO FAESA NEED ANALYSIS	SUBMIT FAESA, B.S.C. APPLICATION FORM, AND APPROPRIATE 1040*	ROLLING BASIS
MASS. STATE SCHOLARSHIP	MUST BE MASS RESIDENT	MUST BE FULL-TIME	MUST BE IN UNDERGRADUATE OR CERTIFICATE PROGRAM	MUST SHOW NEED ACCORDING TO FAESA NEED ANALYSIS	SUBMIT FAESA, B.S.C. APPLICATION FORM, AND APPROPRIATE 1040*	MARCH 1, 1993

RESIDENCY STATUS	ENROLLMENT LEVEL	MATRICULATION REQUIREMENTS	FINANCIAL ELIGIBILITY	GENERAL APPLICATION PROCEDURES*	1993-94 FILING PRIORITY DATE*
NEED NOT BE MASS. RESIDENT	MUST BE AT LEAST HALF-TIME	MUST BE IN UNDERGRADUATE OR GRADUATE DEGREE OR CERTIFICATE PROGRAM	MUST SHOW NEED ACCORDING TO FAFSA NEED ANALYSIS	SUBMIT FAFSA, B.S.C. APPLICATION FORM, APPROPRIATE 1040% AND STAFFORD LOAN APPLICATION	ROLLING BASIS
NEED NOT BE MASS. RESIDENT	MUST BE AT LEAST HALF-TIME	MUST BE IN UNDERGRADUATE OR GRADUATE DEGREE OR CERTIFICATE PROGRAM	MUST SHOW NEED ACCORDING TO FAFSA NEED ANALYSIS	SUBMIT FAFSA, B.S.C. APPLICATION FORM, APPROPRIATE 1040% AND UNSUBSIDIZED STAFFORD LOAN APPLICATION	ROLLING BASIS
NEED NOT BE MASS. RESIDENT	MUST BE AT LEAST HALF-TIME	MUST BE PARENT OF STUDENT IN UNDERGRADUATE OR GRADUATE DEGREE OR CERTIFICATE PROGRAM	CREDIT WORTHINESS ANNUAL LIMIT EQUALS (a) COST OF ATTENDANCE MINUS (c) FINANCIAL AID REQUESTED	SUBMIT PLUS APPLICATION TO B.S.C. WITH CREDIT INFORMATION AS REQUESTED	ROLLING BASIS
NEED NOT BE MASS. RESIDENT	MUST BE AT LEAST HALF-TIME	MUST BE SELF-SUPPORTING STUDENT IN UNDERGRADUATE OR GRADUATE DEGREE OR CERTIFICATE PROGRAM	CREDIT WORTHINESS	SUBMIT FAFSA, B.S.C. APPLICATION FORM, APPROPRIATE 1040% AND SUBMIT SLS APPLICATION TO B.S.C. FINANCIAL AID OFFICE	ROLLING BASIS
NEED NOT BE MASS. RESIDENT	MUST BE AT LEAST HALF-TIME	MUST BE PARENT OR SPOUSE OF STUDENT IN UNDERGRADUATE OR GRADUATE DEGREE PROGRAM	CREDIT WORTHINESS ANNUAL LIMITS, \$1,500 TO COST OF ATTENDANCE	SUBMIT MEFA APPLICATION TO B.S.C. FINANCIAL AID OFFICE WITH APPROPRIATE 1040%	ROLLING BASIS

GENERAL APPLICATION PROCEDURES:

- For programs requesting the filing of a FAFSA, submit FAFSA to federal student aid programs.
- For programs requiring the submission of a Bridgewater Financial Aid Application and 1992 federal income tax forms, forward documents to: Bridgewater State College
Office of Financial Aid
Tillinghast Hall
Bridgewater, MA 02325

- Applications for all programs are accepted after the deadline dates, but the availability of funds for eligible students is NOT guaranteed.

NOTE: For all programs, students must maintain satisfactory academic progress and be a U.S. citizen or eligible non-citizen.

	Federal Stafford Loan Limits*	Federal Unsubsidized Stafford Loan Limits*	Federal SLS Loan Limits
Freshman	2,625	2,625	4,000
Sophomore	3,500	3,500	4,000
Junior	5,500	5,500	5,000
Senior	5,500	5,500	5,000
Graduate	8,500	8,500	10,000

*A student may not borrow more than the grade level loan limit for Federal Stafford, Unsubsidized Stafford, or combination of both.

Student Employment

In addition to the Federal College Work Study Program, the financial aid office provides opportunities for employment both on and off campus through the Student Employment Center. Services of the center are open to all Bridgewater State College students regardless of financial aid status.

Presidential Scholars Tuition Waiver

This program provides tuition waivers and special recognition to students who present exemplary academic credentials and whose background credentials demonstrate a unique and meritorious blending of outstanding academic performance with noteworthy achievements in a talent area. Special consideration is given to candidates enrolled in the College Honors Program.

Entering students are encouraged to contact Dr. Charles Nickerson, director of the honors program, for application information.

Alumni Scholarships

The Bridgewater Alumni Association provides scholarships and a limited number of grants-in-aid each year to currently enrolled Bridgewater undergraduate students. These individual scholarships are provided by separate trust funds, each specifying the particular criteria to be utilized in selecting a recipient for that award. Application forms are available during February each year and may be secured in the Office of Financial Aid, Office of Student Affairs, Office of Alumni Relations, and the Office of Student Activities.

Graduate Assistantships

A limited number of graduate assistantships are offered by the Graduate School, subject to the availability of funds, in areas associated with certain programs of the college. For details regarding graduate assistantships, see the Graduate School section of the catalog.

Other Scholarships

In order to give recognition and prestige to student achievement on campus, many academic departments, clubs, and campus organizations sponsor scholarships and monetary awards to deserving Bridgewater students. A complete listing may be found in the *Student Handbook* and further information regarding application procedures may be obtained in the Office of Student Affairs.

Army Reserve Training Corps (ROTC)

Army ROTC offers a program which provides Bridgewater students the opportunity to graduate as officers and serve in the U.S. Army, the Army National Guard, or the U.S. Army Reserve. Army ROTC enhances a student's education by providing unique leadership and management training, along with practical experience.

Army ROTC three- and two-year full-tuition scholarships are available for Bridgewater students. Each scholarship pays for college tuition and required educational fees, and provides a specified allowance for textbooks, supplies, and equipment. Each scholarship also includes a subsistence allowance of up to \$1,000 for every year the scholarship is in effect.

Students should contact the Department of Military Science, Stonehill College, North Easton, Massachusetts, (508) 230-1025 or 1365.

Air Force Reserve Officer Training Corps (ROTC)

The Air Force Reserve Officer Training Corps (ROTC) is an educational program designed to give men and women the opportunity to become an Air Force officer while completing a bachelor's degree program. The Air Force ROTC program is designed to prepare you to assume positions of increasing responsibility and importance in the Air Force.

In addition, Air Force ROTC full and partial scholarships are available to students who qualify. During the junior and senior years, ROTC cadets are paid monthly stipends.

See the *Multidisciplinary and Pre-Professional Program* section in this catalog for further information.

Undergraduate Academic Programs

Bachelor of Arts/ Bachelor of Science

The Bachelor of Arts and Bachelor of Science Degree programs prepare students for fields of endeavor related to the following areas of study and for graduate school. It also prepares students for high school teaching if high school education is selected as a minor.

<i>Anthropology</i>	<i>Geography</i>
<i>Art</i>	<i>History</i>
<i>Aviation Science</i>	<i>Management Science</i>
<i>Biology</i>	<i>Mathematics</i>
<i>Chemistry</i>	<i>Music</i>
<i>Professional Chemistry</i>	<i>Philosophy</i>
<i>Chemistry-Geology</i>	<i>Physical Education</i>
<i>Communication Arts & Sciences</i>	<i>Physics</i>
<i>Computer Science</i>	<i>Political Science</i>
<i>Earth Sciences</i>	<i>Psychology</i>
<i>Economics</i>	<i>Social Work</i>
<i>English</i>	<i>Sociology</i>
<i>French</i>	<i>Spanish</i>

Except for students in the Humanities, Creative Arts, or History, a student may decide, after having chosen a major, whether to earn a Bachelor of Arts or a Bachelor of Science Degree by the selection of free electives. *A free elective is any course which is not used to meet the General Education Requirements or major requirements.*

Thus, the Bachelor of Science Degree is awarded to those who choose the majority of their free electives in the Social and Behavioral Sciences or Natural Sciences and Mathematics, while the Bachelor of Arts Degree is

awarded to those who choose the majority of their free electives in the Humanities or Creative Arts.

Students are advised to consult with their department chairperson or major adviser early in their academic career, but no later than the end of the sophomore year, in order to be certain that course selection will allow graduation with the desired degree.

Students seeking admission to the Aviation Science major must pass at least a Class II FAA physical for the concentration in Flight Training or a Class III FAA physical for the Aviation Management concentration.

Bachelor of Science in Education

All undergraduate and graduate students seeking professional certification must consult the section of this catalog entitled *School of Education* for information pertaining to changes in the *State Regulations for the Certification of Educational Personnel* and important institutional deadlines.

The Bachelor of Science in Education is currently offered in:

- Early Childhood Education*
- Elementary Education*
- Special Education*

Undergraduate Academic Programs

Major

A student must meet all requirements of the major as specified under the departmental listings. A minimum of 24 credits and a maximum of 36 credits within the major may be required by a department. The 24 to 36 credits reflect all courses taken in the major department, including those which are listed under the distribution of General Education Requirements. At least one half of the required courses in the major field (excluding cognate requirements) must be successfully completed at this college. A minimum 2.0 GPA in the major is required for graduation. The student should select a major by the end of the sophomore year.

Double Major

In order to graduate with a double major, a student must meet all requirements of both majors sought. The student's petition to double major must be made in writing and agreed to by both departments. Official notification of the approval of a double major will be made by the Academic Advising Center. Completion of the double major will be reflected on the finalized transcript.

Students who wish to be elementary, early childhood or special education teachers, are required to select a major in elementary, early childhood or special education and a major in the liberal arts or sciences. Under new state certification requirements, all teachers certified after October 1, 1994 are required to have a major in the liberal arts or sciences.

All students planning to seek certification under existing regulations through Bridgewater State College must successfully complete the baccalaureate degree and courses/experiences by August 1994.

Concentration

A concentration is a unified set of courses usually composed of core requirements and of requirements particular to the chosen area of concentration. The total number of core and particular requirements must be at least 24 but not more than 36 credit hours. Cognate courses (required courses outside the major department) are not counted as part of the 36 hours. Only students selecting the major field of study may complete a concentration within that major. Concentrations are currently available in:

Anthropology
Cultural Anthropology
Public Archaeology

Art
Graphic Design
Crafts
Fine Arts

Aviation Science
Flight Training
Aviation Management

Professional Chemistry
Biochemistry

Communication Arts and Sciences
Speech Communication
Communication Disorders
Theatre Arts

Earth Sciences
Geology

Elementary Education
Middle School

English
Writing

Geography
Environmental Geography

History
Community History
Military History

Management Science
General Management
Energy and Environmental
Resources Management
Finance
Accounting
Marketing
Information Systems Management
Transportation

Philosophy
Applied Ethics

Bridgewater State College

Physical Education

Athletic Training
Coaching
Exercise Science/Health Fitness
Motor Development Therapy/
Adapted Physical Education
Recreation

Physics

Computer Electronics

Political Science

International Affairs
Legal Studies

Psychology

Industrial-Personnel Psychology
Medical Psychology

Sociology

Criminology
Third World Studies

Minor

A minor is a unified set of courses chosen outside of the major field of study requiring not less than 18 nor more than 21 hours. The minor is recorded on the student's transcript. Minors may include courses from only one department or may be multidisciplinary. Students may use courses which satisfy GER's or departmental requirements to fulfill multidisciplinary minor requirements unless otherwise prohibited. At least one half of the courses required for the minor must be successfully completed at this college. Students must achieve a minimum 2.0 cumulative average in declared minors. Specific requirements for a minor are found under the departmental descriptions.

Minors are currently offered in:

<i>American Studies</i>	<i>Management Science</i>
<i>Anthropology</i>	<i>Mathematics</i>
<i>Art</i>	<i>Music</i>
<i>Art History</i>	<i>Philosophy</i>
<i>Aviation Science</i>	<i>Physical Science</i>
<i>Biochemistry</i>	<i>Physics</i>
<i>Biology</i>	<i>Political Science</i>
<i>Canadian Studies</i>	<i>Portuguese</i>
<i>Chemistry</i>	<i>Psychology</i>
<i>Coaching</i>	<i>Public Relations</i>
<i>Communication Disorders</i>	<i>Radio and Television</i>
<i>Computer Science</i>	<i>Operation and Production</i>
<i>Dance</i>	<i>Recreation</i>
<i>Earth Sciences</i>	<i>Russian</i>
<i>Economics</i>	<i>Russian & East European</i>
<i>English</i>	<i>Studies</i>
<i>Exercise Physiology</i>	<i>Scientific and Technical</i>
<i>French</i>	<i>Illustration</i>
<i>Geophysics</i>	<i>Social Welfare</i>
<i>Geography</i>	<i>Sociology</i>
<i>German</i>	<i>Spanish</i>
<i>Health Promotion</i>	<i>Special Education</i>
<i>Health Resources</i>	<i>Speech Communication</i>
<i>Management</i>	<i>Theatre Arts</i>
<i>High School Education*</i>	<i>Urban Affairs</i>
<i>History</i>	<i>Women's Studies</i>
<i>Instructional Media</i>	
<i>Italian</i>	

**Students who wish to become junior high school or high school teachers elect a minor in High School Education and a major from one of the major fields offered. This minor requires more than 21 hours in order to satisfy Massachusetts certification standards.*

All undergraduate and graduate students seeking professional certification must consult the section of this catalog entitled *School of Education* for information pertaining to changes in the *State Regulations for the Certification of Educational Personnel* and important institutional deadlines.

Undergraduate Academic Programs

General Education Requirements

The college requires that all students complete certain General Education Requirements in addition to courses in their major field of study and electives. These requirements are distributed throughout the academic departments so that students will study a variety of disciplines during their college career.

Opportunity exists for students to design their own General Education Requirements rather than following the requirements outlined. For detailed information contact the dean of the School of Arts and Sciences.

General Education Requirements

Students who are accepted for matriculation as freshman for September 1987 and all transfer students matriculated and enrolled after April 1, 1989 will follow the General Education Program outlined below. The intention of the college community in developing the GER program was to respond to the college's mission by providing a firm grounding in certain fundamental skills and methodologies for all recipients of the Bridgewater State College diploma.

The General Education Program is based on the premise that all educated persons, whatever their career interests, should possess the following essential academic skills:

- ability to write clearly and effectively;
- ability to listen and speak clearly and effectively;
- ability to think critically;
- ability to think quantitatively;
- ability to think creatively;
- ability to locate and process information.

The college furthermore has concluded that students should acquire an understanding of a significant body of factual knowledge and principles and experience in the critical and methodological processes of the following:

- description and documentation of Western Civilization which introduces students to a substantial, coherent, and broad perspective on historical knowledge within western culture and to the nature of historical inquiry;
- literary analysis of several literary masterworks of Western Civilization;
- philosophical/theological analysis of significant human concerns;
- systematic study of modes of artistic expression;
- facts, principles and methods developed by the sciences for explaining the physical and biological world;
- facts, principles and methods developed by mathematics for studying mathematical reality;
- systematic study of a foreign language;
- facts, principles and methods for understanding non-Western Civilization.

Specific courses which may be used to satisfy these requirements are listed below. Please note that Introduction to Information Resources must be completed within the first 30 credits at Bridgewater; the Speaking requirement must be satisfied within the first 60 credits; and all GER's should be completed within the first 90 credits taken at Bridgewater State College. In addition, all students must satisfy the state-mandated Constitution requirement and demonstrate proficiency in writing by successfully completing the college's writing proficiency examination.

I Writing 6 crs.
EN 101-102 Writing I, Writing II

II Speaking 3 crs.
CC 130 Human Communication Skills

III Philosophy/Religion 3 crs.
PL 101 Reasoning and Value
PL 102 Reasoning and Human Nature
PL 103 Reasoning and Politics
PL 104 Reasoning and Religion
PL 105 Reasoning and Science

Bridgewater State College

- PR 120 Philosophy, Religion and Moral Issues
(if taken before fall 1992)
- PR 130 Religion, Reason and Revelation
(if taken before fall 1992)
- PR 170 Theology and Reason
(if taken before fall 1992)

IV Locating and Processing Information 1 cr.

- ML 102 Introduction to Information Resources

V History 6 crs.

No more than one course in U.S. History may satisfy this requirement.

- HI 111 Western Civilization to 1715
- HI 112 Western Civilization since 1715
- HI 121 The Ancient World
- HI 124 The World since 1715
- HI 221 United States History and Constitutions to 1865
- HI 222 United States History and Constitutions since 1865
- ID 211 History and Literature of Western Civilization I
(All-College Honors students only)

VI Literature 3 crs.

- EN 211 Literary Classics of Western Civilization to 1600
- EN 212 Literary Classics of Western Civilization since 1600
- EN 214 The Classical Tradition
- EN 221 Major British Writers to 1800
- EN 222 Major British Writers since 1800
- EN 231 Major American Writers to 1865
- EN 232 Major American Writers since 1865
- EN 241 Shakespeare
- EN 251 Literary Themes
- EN 252 Literary Types
- ID 211 History and Literature of Western Civilization I (All-College Honors students only)

VII Artistic Modes of Expression 6 crs.

(select two courses in different disciplines, only one of which may be a studio course) The three disciplines are art (AR and AH courses), Theatre/Dance (CT and CT/PE courses), and Music (MU courses).

Art

- AH 101 Introduction to Art
- AH 102 Introduction to Architecture
- AH 201 Art Survey: Prehistoric, Ancient and Medieval
- AH 202 Art Survey: Renaissance, Baroque and Modern
- AH 203 American Art and Architecture
- AH 214 Art History Study Tour
- AR 112 Introduction to Studio Art (studio)
(if taken before fall 1992)
- AR 125 Drawing I (studio)
- AR 130 Two-Dimensional Design (studio)
- AR 140 Three-Dimensional Design (studio)
- AR 216 Basic Photography (studio)
(formerly ME 152)

Theatre/Dance

- CT 110 Theatre Appreciation
- CT 115 Play Production
- CT 210 Oral Interpretation
- CT 226 Children's Theatre
- CT 236 The American Musical Theatre
- CT/PE 146 Dance Appreciation
- CT/PE 251 Dance History
- CT/PE 255 Creative Dance I

Music

- MU 130 Voice Class I (studio)
- MU 140 Class Piano I (studio)
- MU 160 Music: A Listening Approach
- MU 161 American Music of the Twentieth Century
- MU 167 Music of Black Americans
- MU 170 Music Fundamentals
- MU 240 Class Piano II (studio)

Undergraduate Academic Programs

VIII Physical and Biological Sciences 6 crs.

Select courses from two different departments, of which at least one must be a laboratory course. Laboratory courses are marked with an asterisk (*) in the list below. The departments are biology, chemistry, earth sciences and geography, and physics.

Biology

- BI 100 General Principles of Biology*
- BI 102 Introduction to Zoology*
- BI 106 Introductory Plant Science*
- BI 109 Introduction to Human Disease (non-lab)
- BI 110 Biology: A Human Approach (non-lab)
- BI 111 Human Heredity (non-lab)
- BI 112 Biology and Human Thought (non-lab)
- BI 113 Fundamentals of Biology (non-lab)
- BI 114 Horticulture (non-lab)
- BI 115 The Microbial World and You (non-lab)
- BI 116 Drugs of Plant Origin (non-lab)
- BI 117 The Biological Environment (non-lab)
- BI 118 Evolution (non-lab)

Chemistry

- CH 102 Chemistry in Everyday Life (non-lab)
- CH 111 The Art of Chemical Inquiry*
- CH 131 General Chemistry I*
- CH 141 Chemical Principles I*

Earth Sciences and Geography

- ES 100 Physical Geology*
- ES 102 History of the Earth (non-lab)
- ES 194 Environmental Geology (non-lab)
- GE 100 Physical Geography*
- GE 120 The Physical World (non-lab)
- GE 196 Environmental Geography (non-lab)

Physics

- PH 100 Physics in the Natural World*
- PH 102 Modern Physics for the Humanist (non-lab)
- PH 180 Energy and its Social Uses (non-lab)
- PH 181 Elements of Physics I*
- PH 243 General Physics I*

IX Behavioral Sciences 6 crs.

Select two courses. Each course must be from a different discipline.

Anthropology

- AN 100 Introduction to Cultural Anthropology
- AN 101 Introduction to Physical Anthropology
- AN 103 Introduction to Archaeology
- AN 110 Introduction to Folklore
- AN 111 Myth and Culture

Psychology

- PY 100 Introductory Psychology

Sociology

- SO 102 Introduction to Sociology
- SO 103 Social Problems
- SO 108 Sociology of Religion
- SO 212 Discrimination and Prejudice
- SO 219 Population and Society

X Social Sciences 3 crs.

Select one course from one of the following areas:

- EC 101 Principles of Microeconomics
- EC 102 Principles of Macroeconomics
- GS 110 Human Geography
- GS 170 Regional Geography: The Developed World
- ID 200 Introduction to Canadian Studies
- PO 100 Introduction to Politics
- PO 172 American Government: The Federal System
- PO 260 International Relations
- PO 274 Western Political Thought

XI Systematic Study of a Foreign Language 0/3/6 crs.

Students are required to complete successfully a language course at the second-semester level or to test out of such a course. See the *Department of Foreign Languages* section of this catalog for further information concerning completion of this requirement.

- LA 101-102 Elementary Arabic I-II
- LC 101-102 Elementary Chinese I-II
- LE 101-102 Elementary English as a Second Language I-II
- LF 101-102 Elementary French I-II
- LG 101-102 Elementary German I-II
- LJ 101-102 Elementary Japanese I-II
- LP 101-102 Elementary Portuguese I-II
- LR 101-102 Elementary Russian I-II
- LS 101-102 Elementary Spanish I-II
- LT 101-102 Elementary Italian I-II

Bridgewater State College

XII Mathematics 3 crs.

MA 105 Selected Topics in Mathematics
MA 141 Elements of Calculus I
MA 151 Calculus I

XIII Facts, Principles and Methods for Understanding Non-Western Civilization 3 crs.

This requirement may not be satisfied within the student's major.

AH 205 Far Eastern Art
AN 104 Global Human Issues
AN 206 Native Cultures of North America
AN 208 Anthropology of Women
AN 209 People and Cultures of Africa
AN 213 Latin American Peoples and Cultures
CT 222 Asian Theatre
GS 160 Geography of Non-Western Cultures
MU 162 Music in African Culture
MU 163 Music of the Non-Western World
PE 345 Sport and Physical Education in East Asian Cultures
PL 210 Liberation Ethics
PL 212 Philosophies of India
PL 213 Philosophies of China and Japan
PY 200 Non-Western Theories of Personality
RE 150 Arabia, Muhammad and Islam (if taken before fall 1992)
RE 170 Middle Eastern Islamic Literature (if taken before fall 1992)
RE 199 Comparative Religion: Eastern (if taken before fall 1992)
RE 210 Women and Third World Religions (if taken before fall 1992)
RE 230 Afro-American Religion (if taken before fall 1992)
SO 104 Global Human Issues
SO 210 Society and Culture in Modern India
SO 214 Middle Eastern Societies
SO 217 East Asian Societies: China and Japan
SO 220 Third World Societies
SO 221 Religion and Society in Modern Asia

United States and Massachusetts Constitution Requirement

In addition to the general education requirements listed above, students must fulfill the state-mandated requirement in U.S. and Massachusetts Constitutions. This can be satisfied by enrolling in any one of the following:

HI 221 U.S. History and Constitutions to 1865
HI 222 U.S. History and Constitutions since 1865
PO 172 American Government: The Federal System
PO 273 U.S. and Massachusetts Constitutions
PO 277 American Government: State and Local

Old General Education Requirements

All students who were matriculated at Bridgewater State College as of May 1987 and all students who entered in September 1987 as transfer students will follow the old General Education Requirements. See the 1992-1993 *College Catalog* for a description of these requirements.

Guidelines on General Education Requirements

1. Only one course (3 credit hours) in a student's major field may be applied toward the GER's, except for English and history major programs, in which a maximum of 6 hours may be applied. However, cognate courses required by the major will apply, as appropriate, toward the GER's. NOTE: The requirement of Facts, Principles and Methods for Understanding Non-Western Civilization may not be satisfied within the student's major.
2. No co-curricular activities may be used to satisfy the GER's.
3. Beyond the general education and the major requirements, all remaining courses are free electives. A free elective is any course not required to fulfill either the general education or the departmental and cognate requirements of the major.

Undergraduate Academic Programs

Directed Study

The college permits students to pursue certain of their interests through directed study. Such an undertaking involves independent thinking, hard work, and creativity along with the guidance and help of a faculty member. The end result should be a paper or project accepted by the faculty member working with the student. Directed Study, which is limited to three credits with a maximum of six credits for graduation purposes and is primarily for upperclassmen, is available for the pursuit of such projects requiring independent work. Application forms for directed study are available from the student's department and should be submitted to the department chairperson for his recommendation and then forwarded to the dean of the School of Arts and Sciences or the dean of the School of Education, as applicable, for approval. Completed forms must be received by the registrar's office by the end of the drop/add period to enroll the student.

Internship

A number of departments within the college offer students the opportunity to enroll in an internship, practicum, or field experience for academic credit. Such experiences provide advanced students, usually in their third or fourth year, the chance to undertake a supervised practical experience in their field of study. Normally, field experience opportunities are available only during the fall and spring semesters.

Students interested in such a field experience have the option of (1) consulting with their faculty adviser for details on programs available through the department, or (2) developing their own program proposals, subject to the approval of the department. If the field experience desired is proposed by the student, it is the student's responsibility to locate a faculty member who will provide the necessary supervision.

Application and Selection

Application forms for a field experience are available from the student's department. The completed form must be filed with the chairperson of the department in which the field experience is to be undertaken *no later than the end of the first quarter of the semester prior to the semester in which the field experience is to be undertaken.*

The department will screen all applications in order to select students best suited for the positions available. The chairperson will forward the application forms to

the dean of the appropriate school for approval. The completed form must be received by the registrar's office to enroll the student.

Applicants must have completed at least 54 credits with a minimum 2.0 cumulative GPA. Departments may set higher standards.

Supervision and Grading

Supervision, evaluation and grading of a field experience is the responsibility of each department offering such a program. A student may be removed from the program if, in the judgement of the faculty supervisor, it is in the best interests of the student, agency, and/or college. Grades are based on written evaluations from both the faculty supervisor and the agency supervisor.

Credit

From three to fifteen credits in field experience may be earned and applied toward graduation requirements. The number of these credits which may apply toward the major will be determined by each department. A minimum of 45 clock hours in the field is required for each credit hour granted.

Compensation

Normally, students may not be compensated except for minimal amounts to cover such expenses as travel.

Honors Program

The Honors Program at Bridgewater may be approached in two ways: All-College Honors, which extend through all four undergraduate years, and Departmental Honors, which run from fall of the junior year through to the end of the senior year.

ALL-COLLEGE HONORS

Freshman and Sophomore Years

Students seeking All-College Honors must accumulate a total of nine credits of honors level work during their first four semesters. At least six of these credits must be earned in three-credit honors classes, and the remainder may be earned either in a third honors class or in three one-credit honors colloquia taken at various times over the first two years.

Each semester the college offers at least two three-credit honors classes and approximately ten colloquia. Both ~~honors classes and colloquia are described~~ in the *Course Offering Brochure* issued shortly before registration.

Bridgewater State College

During the 1991-1992 academic year honors classes were offered in PY 100 Introductory Psychology and MA 151 Calculus I in the fall and BI 100 General Principles of Biology and PL 130 Reasoning and Politics in the spring. During the 1992-1993 academic year honors courses were offered in EN 102 Writing II, ID 211 History & Literature of Western Civilization, and PY 100 Introductory Psychology in the fall and AH 102 Introduction to Architecture, BI 100 General Principles of Biology, PO 260 International Relations and PL 104 Reasoning & Religion in the spring.

Honors Colloquia carry only one academic credit, meet once a week for fifty minutes, and culminate in a paper or scientific project which provides the major part of the grade. Minimum enrollment in each colloquium is two and the maximum is twelve. Although most colloquia stand on their own, some (primarily in the sciences) are attached to regularly offered courses which form part of the student's normal program.

One advantage of the three-credit honors classes is that they fit into a student's regular program, satisfying a General Education Requirement and requiring no overload. The colloquia, on the other hand, although they involve a temporary one-credit overload and do not carry GER credit, offer a wide-ranging choice of topics.

Whether in honors classes or colloquia, students are expected to maintain a cumulative Grade Point Average (GPA) of 3.3. Any students who fall below this level may remain in the program for a further semester after which they will be dropped if the deficiency is not corrected. Whenever the GPA returns to 3.3 students may re-enter the program.

Junior and Senior Years

Students who by the end of the sophomore year have completed the nine credits of honors work described above and who have attained a cumulative GPA of at least 3.3 are eligible to continue in the All-College Honors program as juniors either by entering a Departmental Honors program or by undertaking, through the Honors Center, an individually designed Interdisciplinary Honors program. The interdisciplinary option is particularly attractive to students whose majors do not offer Departmental Honors.

At the beginning of each semester of the junior year both Departmental and All-College Honors students select a 300 or 400 level course to take on an "Honors" basis—i.e., the student completes a special advanced project, under the instructor's direction, in conjunction with the course. As a senior, the student researches and

writes an honors thesis (earning three credits for "....485 Honors Thesis") under the direction of a faculty member on a one-on-one basis. Whether the thesis qualifies the student to graduate with all-college honors will be determined by the Departmental Honors Committee or, where appropriate, by the student's Interdisciplinary Honors Committee. For many students the honors thesis is the intellectual high point of the undergraduate experience—fascinating and exciting in its own right, and valuable as a preparation for graduate school or professional employment.

Credit requirements for All-College Honors may be summarized as follows:

- *Nine honors credits at the 100 or 200 level of which at least six must be in three-credit honors classes and the remaining three in a third honors class or in three one-credit honors colloquia;*
- *At least six credit hours in honors course work at the 300 or 400 level obtained by undertaking special advanced work in junior and/or senior level courses (forms proposing such work must be obtained from the Honors Center, filled out, and returned during the first two weeks of the semester);*
- *At least three credit hours of honors thesis work under the direction of the major department based on research or other creative work which can include work in the major, in a related major, or in an interdisciplinary studies area.*

Students who complete the program will have the phrase "with All-College Honors" entered on their transcripts.

Departmental Honors

Departmental Honors Programs, which emphasize independent study and research in the major, begin in the fall of the junior year. Programs are currently offered in the following departments: Art; Biology; Chemistry; English; Foreign Languages; History; Management; Mathematics and Computer Science; Movement Arts, Health Promotion, and Leisure Studies; Philosophy; Political Science; Psychology; and Speech Communication, Theatre Arts, and Communication Disorders. Although GPA requirements vary, most departments require an over-all GPA of 3.0 or at least 3.3 in the major.

Admission to departmental honors programs does not require completion of honors courses or honors colloquia at the freshman and sophomore levels. For specific requirements, please consult the appropriate department or request a copy of the *Departmental Honors Programs* brochure from the Honors Center.

Undergraduate Academic Programs

A minimum of six hours of honors course work taken in the junior and/or senior years is required for departmental honors as well as a thesis or research project. Forms for proposing honors course work and the honors thesis must be obtained from the Honors Center, filled out, and returned during the first two weeks of the semester in which the student wishes to undertake the work. A brief description of honors work at the junior and senior levels will be found under "All-College Honors Junior and Senior Year". Students who complete a departmental honors program will have the phrase "with Honors in [the appropriate field]" entered on their transcripts.

Presidential Scholars

Each year several full-tuition Presidential Scholarships are made available, regardless of financial need, to outstanding students in the entering freshman class as well as to matriculated and transfer students. These scholarships are normally renewable for up to four years provided the student remains in good standing in the Honors Program. Students who wish to apply for Presidential Scholarships should request the application materials from the Honors Center, Harrington Hall.

Honors Center

Students in the program have access throughout the year to the honors center on the second floor of Harrington Hall. Designed as a study area and meeting place, the center has large work tables, comfortable chairs, electronic typewriters with lift-off correction, a lending library, and a Leading Edge word processor with WordPerfect software. The center subscribes to various periodicals (most notably The New York Review of Books, The Times Literary Supplement, Commentary, The American Scholar, and The American Spectator), which are readily available to students. The center is open from 9:00 AM to 5:00 PM on Monday through Friday during the academic year.

Bridgewater Symposia

Each semester the Honors Program sponsors several Bridgewater Symposia — short informal talks by faculty members on subjects of general interest followed by open discussion and refreshments. These Symposia are normally held late in the afternoon or early in the evening. Students in the Honors Program are required to attend at least two Symposia each semester.

FURTHER INFORMATION

Further information on the honors program can be obtained from Dr. Charles Nickerson, Director, Honors Program, Harrington Hall Room 202. Telephone (508) 697-1378.

Multidisciplinary Programs

The college offers a number of multidisciplinary programs, providing majors, minors, and pre-professional programs. See the section on *Multidisciplinary and Pre-Professional Programs*.

Cross Registration

CAPS

College Academic Program Sharing is designed to provide full-time students attending a Massachusetts state college the opportunity to study at another Massachusetts State College in order to add a different or specialized dimension to their undergraduate studies. Students may take 3 to 30 semester hours of credit without going through formal registration procedures and without a formal transfer credit approval process. Courses taken under the CAPS program are not included in the student's GPA. For further information contact the Office of the Registrar.

SACHEM

Through the Southeastern Association for Cooperation of Higher Education in Massachusetts, qualified full-time students may cross-register for two courses each semester, one of which is not offered at their own institution, without going through formal registration procedures. Tuition is covered within the student's full-time tuition charge at Bridgewater State College. Schools participating in this program include: Bristol Community College, Cape Cod Community College, Dean Junior College, Massasoit Community College, Stonehill College, Swain School of Design and University of Massachusetts at Dartmouth. Application for cross-registration must be made through the Office of the Registrar.

Undergraduate Academic Policies

Academic Year

The regular academic year consists of two semesters (fall and spring) of approximately sixteen weeks each. The college also holds two summer sessions of approximately five weeks each. Curricula leading to baccalaureate degrees are so planned that a student carrying 15 credit hours each semester will ordinarily be able to complete the requirements for graduation in four years or eight semesters.

Graduation Requirements

Degrees will be awarded to candidates who have fulfilled the following:

1. A MINIMUM of 120 credits, distributed according to the General Education Requirements, the requirements of a major and any free electives;
2. completion of at least 30 credit hours at Bridgewater, including at least half of the requirements for the major program and for any minors (NOTE: No more than 69 credits earned at a two-year institution, and accepted in transfer by Bridgewater State College, may be applied to the baccalaureate degree);
3. a minimum cumulative grade point average (GPA) of 2.0 at Bridgewater and any other academic requirements of the student's major department as approved by the college governance procedures;
4. a minimum cumulative grade point average (GPA) of 2.0 in the student's major(s) and minor(s) requirements taken at Bridgewater;
5. clearance of all financial debts to the college.

The college conducts two commencement convocations annually—winter and spring. Students who complete graduation requirements in August or December may participate in the winter commencement ceremony.

Conferral of a degree occurs when the registrar finalizes the student's academic record and confirms that all requirements have been satisfied. Participation in the commencement ceremony does not constitute conferral of the degree. Similarly, inclusion of a student's name in such publications as the commencement program does not confirm eligibility for the degree.

Degree Application

Students who expect to receive their degree from Bridgewater State College are required to complete a formal degree application. These applications are available in the Office of the Registrar.

Degree Application Cards must be returned to the Office of the Registrar by:

April 1 for Winter Graduation
October 1 for Spring Graduation
March 1 for Summer Graduation

Undergraduate Academic Policies

Graduation With Honors

Academic excellence for the baccalaureate program is recognized by awarding degrees *summa cum laude* (cumulative GPA of 3.8 or higher), *magna cum laude* (cumulative GPA of 3.6 to 3.79), and *cum laude* (cumulative GPA of 3.3 to 3.59). The cumulative GPA determined for honors is based on all college-level work attempted at Bridgewater State College.

The commencement booklet is printed prior to grades being submitted. Therefore, the registrar's office must print the honors designation that a student has earned up to but not including their final semester. The student's official degree transcript will reflect the appropriate honors designation.

Grading System

The college uses the letter-grade system of marking to indicate the student's relative performance: A — Superior; B — Good; C — Satisfactory; D — Poor; F — Failure; IP — In Progress; W — Withdrawn; WP — Withdrawn Passing; WF — Withdrawn Failing. Grades in the A, B, C, and D ranges may include a designation of plus or minus. In computing averages, grades are assigned the following numerical values:

A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
D-	0.7
F	0.0

No numerical value is assigned to P (Pass), F (Fail), S (Satisfactory), and U (Unsatisfactory) grades.

Certain departments may assign a grade of S — Satisfactory or U — Unsatisfactory for non-classroom courses (e.g. Internships).

Audit

A student may audit (AU) a course to gain knowledge in a particular subject area without earning credit or a grade. Students auditing a course attend and participate in classes; however, they are exempt from examinations.

The course is automatically designated AU and becomes part of the student's permanent academic record. Audited courses will not be used to fulfill degree or graduation requirements.

Incomplete

An incomplete (IN) may be given by an instructor only when a student has missed the final examination for good reason or has not completed a major assignment which can be finished within a short time. *The student's request for an incomplete must be made in writing and must have the instructor's written approval.* Incompletes must be made up no later than the fourth week of the regular academic semester following that in which the incomplete was recorded. A grade of "F" will automatically be entered on the transcript of any student who fails to meet this requirement. Candidates for graduation should note, however, that all work must be completed prior to graduation, including resolution of any grades of incomplete, since as of the date the degree is conferred the record is finalized.

Grades for all courses (day and evening) at Bridgewater State College, become a part of the student's record and are used in computing the GPA.

Repeat Courses

A student may repeat, once, courses for which a D+, D, or D- are earned. Courses repeated must be taken at Bridgewater State College and should be made up within the following year. Such courses may be repeated by carrying an extra course, the overall load not to exceed a maximum of eighteen credit hours per semester or six credit hours during a summer session.

The grades for repeated courses will be computed in the student's GPA, but no additional degree credit will be applied toward the minimum number of hours required for graduation. The grade received for a course which has been repeated will not replace the original grade and the repeated course(s) will be clearly indicated as such on the student's transcript.

Dean's List

The dean's list is published at the end of each semester to honor the academic achievement of full-time undergraduate students. A 3.3 average for the semester is required with a minimum of 12 credits completed, and no grades of "incomplete" (IN).

Bridgewater State College

Academic Standing

In order to remain in good academic standing at Bridgewater your cumulative GPA must remain above the level indicated below:

CREDIT HOURS ATTEMPTED*	ACADEMIC WARNING**	PROBATION GPA	SEPARATION BELOW THIS GPA
0-16	2.0-2.19	Below 2.0	1.00
17-31	2.0-2.19	Below 2.0	1.50
32-46	2.0-2.19	Below 2.0	1.65
47-61	2.0-2.19	Below 2.0	1.75
62-89	2.0-2.19	Below 2.0	1.85
90 and above	must maintain 2.00 or better		

*"Credit hours attempted" includes all work taken at Bridgewater State College plus all credit accepted in transfer. However, only quality points earned at Bridgewater will be utilized in determining the GPA.

**Students who obtain a GPA of less than 2.2 and who have not been placed on academic probation will be notified in writing.

For transfer students during their first semester to remain in good standing at Bridgewater State College, the cumulative GPA must remain at 1.5 or above. After the first semester, transfer students follow the table above.

Students on academic probation are limited to thirteen (13) semester hours during the semester they are on probation. In addition, academic probation may involve an adjustment in the student's academic load, frequent interviews between the student and adviser for the analysis of difficulties and for checking the student's progress, a stipulation that certain courses be taken to improve the student's academic performance, restrictions on the student's extracurricular activities, and other such precautions as are deemed advisable.

Students who have been academically separated from the college may not take courses at the college (day or evening), for at least one academic semester. After this time period, students may apply for readmission through the admissions office. It is recommended that readmission applicants give evidence of at least one semester of academic work at some other institution of higher learning. However, course work taken elsewhere will not necessarily be accepted as transfer credit. An undergraduate matriculated student who is academically dismissed twice can only apply for readmission after a three year period. If readmitted, the student is placed on academic probation and must achieve a minimum GPA of 2.0 in order to continue.

Warning notices are sent mid-semester to all students who are receiving less than a "C" (2.0) average in any course at that time.

Satisfactory Academic Progress

In addition to being in good academic standing (please see the preceding section), a student is defined as making satisfactory academic progress when the academic record shows successful completion of a specified number of credits per semester. Full-time students must earn a minimum of 10 semester credits each semester. Students should note that many financial assistance programs require participants to make satisfactory academic progress, in order to remain eligible.

Classification Designation

Students are designated as being in a given classification on the basis of the number of credits they have earned for courses completed successfully. The list below shows the number of credits which must be recorded in order for a student to be designated as a member of a particular classification.

Students should understand that these are *minimum* totals of credits accrued. The normal course load is 15 credits per semester, and it is this total which, maintained over eight semesters, yields the 120 credits required as a minimum for the baccalaureate degree.

For registration purposes, students will be classified based upon the total number of credit hours earned prior to the semester in which the registration is held.

Classification	Credit Hours Completed
Senior	84
Junior	54
Sophomore	24
Freshman	--

Undergraduate Academic Policies

Registration

A registration and advising period is held each semester (November in the fall, April in the spring and May and June in the summer). Students meet with their adviser at this time to review the student's progress toward meeting General Education Requirements and specific degree requirements. A class schedule is developed and the student then attends registration at their designated registration session.

The Course Offering Brochure published shortly before each registration period provides specific registration dates and instructions on how to register. A number of departments conduct a pre-registration session for their majors. Information concerning pre-registration dates may be obtained from the academic department. Note that all financial obligations to the college must be met and health records completed prior to the beginning of the registration period.

Course Loads

Full-time undergraduate students must carry a course load of 12 to 18 credit hours or the equivalent each semester. The typical course load is 15 hours. Students wishing to carry more than 18 credit hours must receive permission from the appropriate dean (dean of arts and sciences or the dean of education) prior to registration. Failure to carry at least 12 credit hours may jeopardize housing, financial aid status and athletic eligibility. It is recommended that students limit their course load during the summer to 6 credit hours each session.

Students may not carry semester courses during the session in which they enroll in Student Teaching.

Attendance Policy

Class attendance is considered to be an important part of the educational process. At the beginning of each course, the faculty member should explain in writing their policy on attendance, particularly what is considered excessive absence and unexcused absence. Having this information, students are expected to use good judgement and discretion about attending class. **First-semester freshmen and students on probation are not allowed unexcused absences.** NOTE: If a student fails to attend the first three class hours of a course, the instructor has the option of deleting the student from the class roll.

Please refer to the *Student Handbook* concerning procedures regarding notification of absence, absence due to conferences, athletics or religious holidays and absence during the student teaching experience.

Course Drops and Adds

Schedule Adjustment Day is held prior to the beginning of classes each fall and spring semester to allow students the opportunity to make changes in their schedules.

In addition, during the first two weeks of a semester course or during the first five days of a quarter course, students may drop or add courses and no grade will be given. Drop/add forms are available at academic departments and at the Academic Advising Center during the drop/add period. It is advisable, that students discuss changes in their schedule with their adviser. Students taking courses after 4 p.m. should consult the Course Offering Brochure for schedule adjustment dates.

If a student does not follow these procedures, a grade of "F" will be entered on their academic record. This grade will be used in computing the GPA.

If a student fails to attend the first three scheduled class hours of a course, the instructor has the option of deleting the student from the class roll.

Withdrawal From Courses

If for some serious reason, a student wishes to withdraw from courses after the drop/add period, written permission must be secured on forms provided by the Office of the Registrar. Only if such a form is filed in the registrar's office by the end of the fifth week of a semester course, or by the end of the third week of a quarter course, may the grade of "W" be recorded. A student who withdraws between the fifth week and the tenth week of a semester course, or between the third and fifth week of a quarter course, will be assigned a grade of WP or WF. In all other instances a grade of "F" shall be given. *Normally, no student will be permitted to withdraw from a semester-long course after the tenth week of classes, or after the fifth week of a quarter course.*

Bridgewater State College

Course Audit

Students may audit courses under the guidelines noted below. The student will receive no academic credit for the courses nor will a grade be reflected in his cumulative grade point average.

1. A student may audit a course subject to the approval of his adviser or department chairperson and consent of the instructor.
2. Students are subject to conditions established by the department and/or instructor for the audited course.
3. Students registering for credit have course enrollment preference over auditing students. Therefore, a student must register for audit only during the drop/add period by submitting forms provided by the registrar's office. A student's status as an auditor in a course cannot be changed.
4. Students are expected to register for not more than one audit course per semester. Exception may be granted by petition to the dean of Arts and Sciences or the dean of Education.
5. No credit is awarded for audited courses. The student's transcript will reflect the course enrollment with the notation AU (no credit).

Leave of Absence

An undergraduate student who wishes to interrupt academic studies for one or two semesters (excluding the summer sessions), for financial, professional, or personal reasons, need not officially withdraw from the college. Instead, the student may take a one — or two — semester leave of absence by notifying the Academic Advising Center no later than thirty days prior to the beginning of the first semester of leave. Such a leave of absence will not affect the student's academic standing, the program and degree requirements under which that student first matriculated, or one's future eligibility for financial aid or housing, provided that the returning student meets specified guidelines and deadlines for application for such services. Please consult the financial aid office in advance to determine the effect of a leave on aid.

Withdrawal From College

Forms for official withdrawal from the college may be obtained from the Academic Advising Center located in the Maxwell Library. Professional staff from the Academic Advising Center will assist in completing the process, including the review of alternatives available to the student. Resident students must also have their withdrawal form signed by the director of Residence Life and Housing, or a designee of that office. Should the student leave the college without giving official notification, failing grades will be recorded for all courses. After the tenth week of classes, grades will be recorded for all classes and the withdrawal will not be effective until the last day of the semester.

Students who withdraw from the college for reasons other than academic dismissal or withdrawal by the college may re-enter by contacting the registrar's office.

Students who withdraw due to academic dismissal should refer to the section on *Academic Standing*.

Declaration of Major for Freshmen

All students who entered as freshmen must formally declare a major or choose the status of an undeclared major in the second semester of the freshmen year. Prior to this declaration freshmen may change their area of interest by obtaining the necessary forms from the Academic Advising Center. Although Early Childhood, Elementary Education, and Special Education majors may not be formally admitted into the Teacher Education Program until the second semester of the sophomore year, they must confirm their continued interest in these majors by the same process used by the other freshmen for declaration of majors.

Change of Major for Upperclassmen

Students may change majors at any time by obtaining a "change of major card" from the Academic Advising Center, securing the signatures of the department chairpersons involved, and filing the completed card with the Academic Advising Center.

Undergraduate Academic Policies

Declaration of Minor

In order to be enrolled in any minor offered by the college, a student must declare the intended minor on forms available from the Academic Advising Center.

Students planning on being certified as secondary teachers should declare their minor in High School Education during their freshman or sophomore year.

Certification that the requirements of the minor have been met is made on the Degree Application Card by the department offering the minor. Students must achieve a minimum 2.0 cumulative average in declared minors for graduation.

Credit by Examination

The college encourages qualified students to meet certain graduation requirements through "Credit by Examination." Currently the college will award credit for successful completion of the College Level Examination Program's (CLEP) general or subject area examinations. In addition, certain departments offer their own examinations for which credit can be awarded. Additional information can be obtained from the Office of Admissions.

Transfer of Credit After Admission

In order for undergraduates to receive credit for courses taken at other accredited institutions, approval must be obtained in advance.

Application forms are available in the Office of the Registrar. Applications for approval of a course from another institution should be accompanied by the appropriate catalog from that institution. Transcripts of these approved courses must be submitted to the registrar's office within six weeks after the completion of the course. Approval must be obtained prior to registering for class. It is the student's responsibility to have official transcripts sent directly by the institution to the Office of the Registrar.

NOTE: Not more than sixty-nine credits may be transferred from a two-year college.

Grades for courses taken at an institution other than Bridgewater State College are not used in computing the student's GPA.

Plagiarism

Academic honesty is expected of all students; plagiarism and cheating are not condoned and are subject to an academic penalty, which may be failure for the course in which the violation took place. A record of the violation is kept and repeated offenses may result in suspension or dismissal from the college.

Standards for Representing the College

In order to represent the college in intercollegiate competition, or as an officer of a recognized club, organization, society, team or governance body, a student must:

- Be in good academic standing.
- Be a full-time student, which is defined as carrying a minimum of 12 semester hours of credit.
- Not have completed undergraduate degree requirements.
- Have completed not more than eight full semesters in the day session except when the academic affairs office can verify that the academic program is not one that can normally be completed within eight full semesters.

Such eight full semesters in the case of a transfer student include the number of semester's work granted in transfer credit.

Intercollegiate Athletic Eligibility

The following six rules govern intercollegiate athletic eligibility for most students attending Bridgewater.

1. A student athlete must be a full-time undergraduate student.
2. A student athlete must be enrolled as a degree-seeking student.
3. A student athlete must maintain a minimum of twelve (12) credit hours or the equivalent each semester.
4. A student athlete's Grade Point Average (GPA) must meet the requirements of good academic standing as defined in this catalog.
5. A student athlete must pass 24 credit hours (normal progress rule) or the equivalent in an academic year as a full-time student.

Bridgewater State College

6. A student athlete must sign the N.C.A.A. Student Athlete Statement concerning eligibility, a Buckley Amendment Consent, and a drug testing consent, in addition to a Massachusetts hazing prohibition form.

In addition, there are very specific requirements which must be met in the case of transfer students from other four-year institutions, transfer students from two-year or junior colleges, and students who have been involved in multiple transfers. For information, please confer with the director of Athletics.

Dismissal Policies

A student is admitted to Bridgewater State College in the expectation that her or she will accept and abide by the standards of conduct and scholarship established by the faculty, administration and student governing boards. The college reserves the right to require any student to withdraw who does not maintain acceptable academic standing. The college also reserves the right to dismiss with due process a student who does not meet the requirements of conduct and order, or whose behavior is inconsistent with the standards of the college. The *Student Handbook* outlines campus policies and may be obtained in the Office of Student Affairs.



The Graduate School

The Graduate School at Bridgewater State College acts as a coordinating institution among the departments engaged in graduate instruction. The graduate dean, the graduate faculty, and the Graduate Education Council are responsible for the maintenance of appropriate standards for graduate degrees and certificates.

The primary objective of Bridgewater's graduate programs is to increase to an advanced level the graduate student's understanding of and competence in a designated field of study. By extending the student's area of knowledge, research skills, and creative talents, the graduate programs of the college aim to increase the individual's ability to pursue and contribute to a satisfying career.

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The Office of the Graduate School is located in the Maxwell Library, ground floor, Park Avenue entrance. The graduate school office is open Monday through Thursday from 9 a.m. to 8 p.m. and Friday from 9 a.m. to 5 p.m.

Persons interested in working toward a master's degree or Certificate of Advanced Graduate Study (CAGS) program on either a full-time or part-time basis should request appropriate application material. Students are responsible for being aware of the general policies, procedures, and program requirements of the Graduate School outlined in the following pages prior to enrolling in courses carrying graduate credit. For additional information relative to a specific graduate program, students should contact the appropriate department graduate program coordinator by telephoning (508) 697-1200 and asking for the department involved. For

general information in addition to that provided in the catalog, students may make an appointment with a counselor by telephoning the Graduate School at (508) 697-1300.

Graduate Programs

Master of Arts

Programs leading to the degree of Master of Arts are offered in the areas of:

- Biology
- Chemistry
- Communication Studies
- English
- History
- Psychology

Bridgewater State College

Programs leading to the degree of Master of Arts in Teaching are offered in the following fields:

- Behavioral Sciences
- Biology
- Chemistry
- Creative Arts
- Earth Sciences
- English
- Foreign Languages
- Geography
- History
- Mathematics
- Physical Sciences
- Physics
- Social Sciences
- Speech Communication and Theatre

Master of Education

Programs leading to the degree of Master of Education are offered in the following fields:

- Counseling
- Early Childhood Education
- Elementary Education
- Elementary School Mathematics
- Health Promotion
- Instructional Media
- Reading
- School Administration
- School Librarianship
- Special Education

Master of Science

Programs leading to the degree of Master of Science are offered in the following fields:

- Computer Science
- Physical Education

Certificate of Advanced Graduate Study (CAGS)

Programs leading to the CAGS are offered in the following fields:

- Behavioral Sciences
- Creative Arts
- Education
- Natural Sciences and Mathematics



Certification Programs

Programs designed to lead to the certification of educational personnel are available to qualified persons who have earned a bachelor's degree and who are interested in one of the certificates listed below.

To be eligible, individuals must be officially admitted by the Graduate School to an appropriate Master of Arts in Teaching or Master of Education program. All of the programs listed have been approved by the Massachusetts Department of Education and include automatic certification in a number of states which have reciprocity agreements with Massachusetts.

Classroom Teaching Certificates:

Early Childhood Teacher (K-3)
 Elementary Teacher (1-6)
 Teacher of Art (5-12)
 Teacher of Behavioral Science (9-12)
 Teacher of Biology (9-12)
 Teacher of Chemistry (9-12)
 Teacher of Drama (9-12)
 Teacher of Earth Sciences (9-12)
 Teacher of English (9-12)
 Teacher of French (9-12)
 Teacher of Geography (9-12)
 Teacher of Health (K-9, 5-12)
 Teacher of History (9-12)
 Teacher of Mathematics (9-12)
 Teacher of Physical Education (K-9, 5-12)
 Teacher of Physics (9-12)
 Teacher of Social Studies (9-12)
 Teacher of Spanish (9-12)

Additional Certificates:

Administrator of Special Education
 Consulting Teacher of Reading (K-12)
 Director of Guidance
 Director of Pupil Personnel Services
 School Guidance Counselor (N-9, 5-12)
 School Principal (N-6, 5-9, 9-12)
 Superintendent/Assistant Superintendent (All Levels)
 Supervisor/Director (Various Levels)
 Teacher of Children with Moderate Special Needs (N-9)
 Unified Media Specialist (N-9, 5-12)

For detailed information regarding the college's certification programs, please contact the appropriate academic department.

Admissions

Admission Standards

Students seeking admission to a program leading to a master's degree must hold a bachelor's degree from a four-year institution of acceptable standing. (College seniors may be admitted on a conditional basis.) Students seeking admission to a CAGS program must hold an appropriate master's degree from an institution of acceptable standing.

Master's degree applicants must meet the following criteria in order to receive a "clear admit" (full graduate student status):

1. A composite score of 900 on the quantitative and verbal parts of the GRE General Test.
2. A 2.75 undergraduate GPA based upon four years of work, or a 3.0 undergraduate GPA based upon work completed during the junior and senior years.
3. A rating of 1 (on part IV) on the three letters of recommendation (with 1 being the highest rating on the scale). At least two of the recommendations should be from professors and the third letter of recommendation could be from a professional employer.

Applicant's who do not meet the "Clear Admit" status will be granted a "Conditional Acceptance" if they meet the following criteria:

1. A 2.5 undergraduate GPA based upon four years of work, or a 2.75 undergraduate GPA based upon work completed during the junior and senior years.
2. A composite score of 600-899 on the quantitative and verbal parts of the GRE General Test.

Bridgewater State College

3. A rating of at least 2 on the three letters of recommendation (with 1 being the highest rating on the scale). At least two of the recommendations should be from professors and the third letter of recommendation could be from a professional employer.

Conditions that must be met to move from conditional to full graduate student status:

1. The student must enroll in GP 501 Graduate Program Planning and meet with his adviser who will recommend three graduate courses that must be taken at Bridgewater State College.
2. GC 500 Research and Evaluation (or its equivalent, if the major requires a substitute course) must be taken as one of the three courses; the other two courses will be in the academic major.
3. The student must meet a GPA of at least 3.0 after completion of the three required courses.

If the student makes a GPA of at least 3.0 after completing the courses, he would be moved into full graduate student status. If the student does not make a GPA of at least 3.0 after completing the courses, he would automatically be dismissed.

New Requirements for All Applicants:

- Students will be required to enroll in GP 501 Graduate Program Planning immediately after acceptance into the Graduate School and prior to enrolling in any additional courses. Details will be provided at the time of admission.
- Students will be required to take GC 500 Research and Evaluation (or its equivalent, if the major requires a substitute course) within the first nine credits of their graduate program. (Students admitted during the 1992-1993 academic year who have completed nine or more credits prior to acceptance will be required to take GC 500 as their next course.)

Effective September 1, 1993:

- Students will be limited to six graduate credits, prior to admission, for transfer into their graduate program, whether taken at Bridgewater State College or another accredited institution.

- Students will be able to apply for admission into the Graduate School during any of the four admission reviews: February, May, August, or November.

Application Procedures

The Graduate School presently admits students during the fall and spring semesters of each year. An application is not complete unless all of the appropriate documents indicated below have been received by the Office of the Graduate School on or before the appropriate application deadline:

October 1 for November admission
December 1 for February admission
March 1 for May admission
July 1 for August admission

It is the responsibility of the student to make certain that all application documents are received on time. Applicants should indicate a specific degree or certificate program (and also the area of study) when they request application forms. Any student who has filed material for admission to a given graduate program or area of study, and subsequently decides to apply for admission to another program or area of study, should consult the paragraph on "Changes in Program" in this section of the Catalog.

It should be noted that certain programs require a formal interview with the program coordinator. Please consult the department requirements presented in this catalog.

Applicants to the Graduate School should make certain that the material listed below is on file in the Graduate School office. Application forms with fee payments and all other correspondence and application material should be sent to the Graduate School Office, Bridgewater State College, Bridgewater, Massachusetts 02325.

1. An appropriate application form and Graduate School Application Fee of \$25.00.

Application forms may be obtained from the Graduate School. Checks covering the nonrefundable \$25.00 Graduate School application fee should be made payable to *Bridgewater State College* and submitted to the Graduate School accompanying the program application form.

2. Three official copies of all undergraduate and graduate transcripts.

All transcripts must be sent by college registrars directly to the Graduate School and must bear the seal of the college. Applicants who have attended more than one undergraduate college and/or graduate school should arrange to have transcripts of all course work, including grade results, sent directly to the Graduate School. Graduates of Bridgewater State College and persons who have taken non-degree credit at the college should request the college registrar to send transcripts to the Graduate School.

Applicants who have successfully completed graduate courses, as well as those who hold a degree(s) in addition to the baccalaureate, must fulfill all application requirements as set forth in this catalog. It should be noted that the successful completion of graduate courses prior to application shall not obligate the academic department or the Graduate School to recommend an applicant for acceptance.

3. The results of the Graduate Record Examination (GRE) — master's degree applicants only.

All master's degree applicants must arrange to have scores from the GRE general test (formerly called aptitude test) sent from the Educational Testing Service directly to the Graduate School. Photocopies of scores and scores submitted by the applicant are not acceptable. Application forms and information relative to the Graduate Record Examinations may be obtained from the Graduate School. Since up to six weeks may elapse between the test date and the receipt of scores, applicants should take the test well in advance of the Graduate School's deadline for receipt of completed applications. In addition, applicants for certain Master of Arts and

Master of Science programs must submit scores from the appropriate Subject Test (formerly called Advanced Test). All applicants from countries where English is not an official language, must also submit scores on Educational Testing Service's Test of English as a Foreign Language (TOEFL) examination. Ordinarily, only students with TOEFL scores of 550 or better will be considered for admission.

As indicated above, all master's degree applicants must submit the results of the Graduate Record Examination. In addition, students may submit Miller Analogies Test scores. Information relative to the Miller Analogies Test may be obtained by contacting the Office of Academic Affairs (697-1295).

4. Three letters of recommendation — master's degree applicants only.

Forms for recommendations are available at the Graduate School. In general, only letters of recommendation submitted on these forms and sent by the reference directly to the Graduate School will be accepted. These letters provide an estimate of the applicant's ability to pursue successfully a master's degree program in the proposed field or concentration. For M.A.T. and M.Ed. applicants at least two letters must be from the faculty who have taught the applicant at the collegiate level (undergraduate or graduate). The third letter may be from an appropriate employer or school administrator for whom the applicant has taught. For M.A. and M.S. applicants at least two letters must be from persons who have taught the applicant in the appropriate area of concentration. The third M.A. letter may be from any faculty member who has taught the applicant at the collegiate level or from an appropriate employer or school administrator for whom the applicant has taught.

5. Additional departmental requirements.

There may also be special departmental requirements relative to the application, such as an interview. Such requirements, if any, are to be found under each department's description of its graduate program(s).

Bridgewater State College

Action by the Department

All completed applications are sent to the academic department in which the applicant proposes to concentrate. After reviewing these applications, departments make recommendations to the Graduate School.

Action by the Graduate School

The graduate dean, after reviewing the recommendations of the academic department, notifies the applicant of the action taken. This notification will be mailed by late December and late May.

Graduate Advisers and Program Planning

Each graduate student who is accepted is assigned an adviser(s) representing the student's area of study. All students are required by the Graduate School to enroll in the following program planning course, in addition to completing minimum credit requirements in their program.

GP 501 Graduate Program Planning 1 graduate credit

The planning and development of a coherent program of graduate study appropriate to the student's academic and professional background and objectives. Graduate students who have been accepted into a master's degree or CAGS program should enroll under the direction of their adviser(s) immediately after acceptance by the Graduate School and prior to enrolling in any additional courses. For details, students should contact their adviser.

All accepted students will receive from the Graduate School copies of the form *Graduate Program Proposal*. Students are required to have a completed copy of this form sent to the Graduate School when applying to graduate. It should be noted that conferences with advisers may be difficult or impossible to arrange during holidays and college vacations, and during the months of June, July, and August.

Change in Program

Any request to change from one graduate program to another must be made prior to the deadline for receiving completed applications as indicated in the college calendar. Students wishing to change programs should request the Graduate School in writing to review their file to determine what additional material needs to

be submitted. Students requesting a change in program should be aware that their original date of acceptance by the Graduate School will not change. Appropriate credits earned prior to a program change may be transferred to the new graduate program with the approval of the new adviser.

General Policies and Procedures

Students are responsible for all information given in the latest edition of the catalog and also for any notices posted on the bulletin boards of the Graduate School, the registrar's office, the library, and the appropriate academic department. Students who have questions regarding the graduate regulations presented in this catalog should contact the Graduate School.

Grading System

Graduate course achievement will be rated A (4.0), A- (3.7), B+ (3.3), B (3.0), B- (2.7), C+ (2.3), C (2.0), C- (1.7), F (0), W (Withdrawn), IN (Incomplete), or AU (Audit). GP 501 Graduate Program Planning will be graded on a P (Pass)/F (Fail) basis.

Academic Probation

Any graduate whose cumulative GPA falls below 3.0 will be notified that he or she is on probation. Also, if a graduate student receives two grades below B- (or one grade of F), he or she will be placed on academic probation. Graduate students on probation will be required to meet with their adviser prior to registering for any additional coursework.

Academic Dismissal

Any graduate student who has a cumulative GPA below 3.0 for more than two semesters is subject to academic dismissal. Also, any graduate student who receives a third grade below B- (or a second grade of F) is subject to academic dismissal.

Academic Average for Graduate Degrees

In the courses which a graduate student offers to satisfy degree requirements, the minimum standard for satisfactory work is a 3.0 average.

Satisfactory or Reasonable Progress

Graduate students must make satisfactory or reasonable progress toward completion of a degree program within the Graduate School's statute of limitations. A student who is not making such progress is subject to separation from the program.

Statute of Limitations—Program and Courses

All graduate program requirements, including the comprehensive examination, must be completed within six years of the date of the student's acceptance. In addition, no graduate course offered for master's degree or CAGS credit may be more than six years old at the time program requirements are completed.

Maximum Credit Load

Full-time graduate students may register for up to fifteen credits during the fall and spring terms, and up to six credits during each of the two summer sessions. Students wishing to register for more than the maximum credit load must receive permission in writing from their graduate adviser, program coordinator, and the graduate dean.

Full-Time and Part-Time Student Status

Full-time graduate study is defined, for academic purposes only, as being enrolled for nine or more graduate credits in a given term. Part-time graduate study is defined, for academic purposes only, as being enrolled for less than nine graduate credits in a given term.

Graduate and Undergraduate Credit

Courses at Bridgewater with 500 level numbers carry graduate credit and are open only to graduate students. Certain courses numbered below 500 may be taken for either graduate or undergraduate credit. Graduate

School guidelines for faculty teaching these latter courses indicate that advanced work should be required of graduate students. The guidelines recommend that more rigorous examinations and more sophisticated term papers should be expected to take into account the different quantitative and qualitative standards associated with graduate study.

Program and Course Prerequisites

Program prerequisites may be required to ensure adequate preparation for graduate work in the area of study. In certain cases, these prerequisites may be fulfilled after the applicant's acceptance by the Graduate School. Certain advanced courses require that students have completed specific prerequisite courses.

Transfer Credit

Transfer credit at the graduate level is defined at Bridgewater to include two distinct credit situations. First, transfer credit is defined as being any appropriate graduate credit taken at Bridgewater State College or at another accredited institution *prior to acceptance* to a Bridgewater graduate program. This includes appropriate graduate credit earned in courses in which the student is enrolled at the time of acceptance. Second, transfer credit is defined to include appropriate graduate credit taken at an accredited institution other than Bridgewater State College *after acceptance* to a Bridgewater graduate program. All courses to be used as transfer credit in a graduate program must have the approval of the adviser and be recorded on the student's *Graduate Program Proposal*. Details regarding the matter of transfer credit as it applies to Bridgewater's master's degree and CAGS program are provided below.

Bridgewater State College

Transfer Credit — Master's Degree Programs

A student who has enrolled in appropriate courses at Bridgewater or at another accredited institution prior to acceptance by the Graduate School may request that up to six graduate credits be accepted in partial fulfillment of degree requirements. This includes any credits earned in courses in which the student is enrolled at the time of acceptance. It does not include prerequisites. Approval is subject to the following conditions: 1) that a grade of B- or better has been earned in all courses being transferred; and 2) that courses being transferred have not been used to fulfill the requirements of another degree or certificate. A form entitled *Petition for Acceptance of Transfer Credit* is sent to the student by the Graduate School at the time of acceptance. If courses enrolled in prior to acceptance are to be applied toward fulfillment of requirements for a master's degree, it is the student's responsibility to submit the approved transfer credit form to the Graduate School after completing GP 501 Graduate Program Planning. It should be noted that all transfer courses are subject to the regulations governing time limits — no graduate course offered for the degree may be more than six years old when degree requirements are completed.

After a student has been admitted to a master's degree program, a maximum of six graduate credits of grade B or better, taken at an institution accredited at the graduate level other than Bridgewater State College, may be transferred if approved by the adviser. It should be noted, however, that of the total number of credits offered for the degree, taken both prior to and after acceptance, not more than six can be transferred from other graduate schools. Two official transcripts of courses taken at another institution after acceptance must be sent directly to the Bridgewater State College Graduate School.

Transfer Credit — CAGS Program

A student who has enrolled in appropriate courses at Bridgewater or at another accredited institution after completion of a master's degree and prior to acceptance in a CAGS program may request that up to six graduate credits be accepted in partial fulfillment of CAGS requirements. This includes credit earned in courses in which the student is enrolled at the time of acceptance. It does not include prerequisites. (CAGS in Education applicants, who must enroll in ED 570 CAGS Seminar prior to review of their application, may request that up to six graduate credits in addition to ED 570 be accepted as transfer credit.) A grade of B- or better is required of all courses being transferred. A form entitled *Petition for Acceptance of Transfer Credit* is sent to the student by the

Graduate School at the time of acceptance. If courses enrolled in prior to acceptance are to be applied toward fulfillment of CAGS requirements, it is the student's responsibility to submit the approved transfer credit form to the Graduate School Office after completing GP 501 Graduate Program Planning. It should be noted that all transfer courses are subject to the regulations governing time limits — no graduate courses offered for the CAGS may be more than six years old when certificate requirements are completed.

After a student has been admitted to a CAGS program, a maximum of six graduate credits of grade B or better, taken at an institution accredited at the graduate level other than Bridgewater State College, may be transferred if approved by the adviser. It should be noted, however, that of the total number of credits offered for the CAGS, taken both prior to and after acceptance, not more than six can be transferred from other graduate schools. Two official transcripts of courses taken at another institution must be sent directly to the Bridgewater State College Graduate School.

Repeating Courses

Unless otherwise noted a course may be taken more than once but only the grade earned in the initial course may be counted toward degree requirements.

Incompletes

An incomplete (IN) may be given by an instructor only when a student has missed the final examination for good reason or has not completed a major assignment which can be finished in a short period of time. An incomplete at the graduate level must be completed by the end of the following semester. Courses which are not successfully completed by this deadline will automatically be changed to a grade of F (Failure).

Course Registration

Prior to the registration period for the fall, spring, and summer semesters a *Course Offering Brochure* is distributed by the registrar's office in Boyden Hall.

Graduate course work is offered on either a full-time or part-time basis. Students should realize that it is not possible to set an absolute deadline for completing a graduate program, due to such factors as the college's need to reserve the right to cancel any course for which there is insufficient enrollment and departments' need to offer courses on a rotating basis.

Withdrawal

Withdrawal from Courses

If, for some reason, a student wishes to withdraw from a course after the drop/add period, written permission must be secured on forms provided by the Office of the Registrar. Only if such a form is filed in the Office of the Registrar within the first five weeks of a semester course, may the grade of "W" be recorded. A student who withdraws between the fifth week and the tenth week of a semester course will be assigned a grade of WP or WF. In all other instances a grade of "F" shall be given. Normally, no student will be permitted to withdraw from a semester-long course after the tenth week of classes, or after the fifth week of a quarter course.

Withdrawal from the College

Students who decide to withdraw from a graduate program should notify the Graduate School of their intentions in writing as soon as possible. (Students should also consult course withdrawal procedures and refund policies indicated elsewhere in the catalog.)

Course Drops and Adds

Schedule adjustment days are held prior to the beginning of classes each semester to allow students the opportunity to make changes to their schedules. In addition, during the first two weeks of a semester or the first five class days of a quarter, students may drop or add courses and no grade will be recorded. Drop/add forms are available from the Office of the Registrar during the Drop/Add period.

If a student does not follow these procedures, a grade of "F" will be entered on the record. This grade will be used to compute the GPA.

Deadlines

Students are reminded to consult the annual college calendar for deadlines and dates relative to such matters as: admissions, Graduate Record Examinations, comprehensive examination requests, approval of transfer credit, and application to graduate. This calendar is printed in the college catalog and *Course Offering Brochure*.

Change of Name and/or Address

Students should promptly notify the Office of the Graduate School of any change in name or address by using the appropriate form. Failure to do this may cause unfortunate complications and delays which inconvenience students. Forms are available at the Office of the Graduate School.

Bridgewater State College

Graduate Assistantships

The Graduate School offers a number of graduate assistantships in areas associated with the college's graduate programs. Only those who have been accepted into a Bridgewater State College graduate program are eligible to be awarded a graduate assistantship. Application forms may be obtained from the Office of the Graduate School. Completed assistantship applications should be returned to the appropriate academic department. Applicants who are awarded an assistantship will receive a letter of appointment from the dean of the Graduate School.

Graduate assistants receive a stipend for the academic year (September-June). Assistants will also receive tuition and fee remission for up to nine credits of course work during each of the fall and spring semesters, and for up to six credits of course work during the summer session(s). The tuition and fee waiver applies only to courses offered after 4 p.m. Graduate assistants are expected to work a minimum of 20 hours per week.

For information regarding additional forms of financial assistance, see the section of this catalog titled *Financial Aid*.

Independent Study

Each department's graduate offerings include two courses in which a student who has been accepted in a graduate program and who meets the course prerequisites can pursue independent study under the direction of a faculty adviser.

—502 Research (credit to be arranged) — Original research undertaken by the graduate student in his or her field. The student's investigations ordinarily culminate in a thesis. The number of credits awarded for the research may vary, and the student may repeat the course until a maximum of nine credits in an M.A. program and six credits in an M.A.T., M.Ed., M.S., or CAGS program is earned toward the minimum credit requirements for the degree or certificate.

Matriculated graduate students who wish to enroll in *Research* must complete and file with the Graduate School the Graduate School form *Approval of Thesis Topic and Outline*. A Graduate School letter of approval to enroll in —502 should be requested.

—503 Directed Study (credit to be arranged) — This course is designed for the graduate student who desires

to study selected topics in his or her field. *Directed study* may not be used to substitute for courses which are required in the program or to study topics which are covered in required or elective courses in the program. The number of directed studies approved by the Graduate School dean in a given academic year will be limited due to both academic and budgetary reasons.

Students who wish to enroll in *directed study* should first meet with their adviser and, if approval is granted, obtain the form *request for directed study* from the Graduate School Office. Please note that *directed study* follows the same registration procedures as all other academic course work on campus; that is, arrangement for *directed study* must take place prior to the time of registration with all forms completed and on file at the appropriate departmental office.

Enrollment in *directed study* is limited to students who have been accepted to a graduate program at Bridgewater State College and who have completed a minimum of fifteen approved graduate credits.

Thesis

Graduate students submitting a thesis should obtain a copy of the Graduate School brochure entitled *The Master's Thesis*.

The student's thesis committee is comprised of at least three faculty members, including a thesis committee chairperson appointed by the graduate program coordinator. All thesis committee appointments should follow consultation with the student's adviser and the student.

It is the responsibility of the student to obtain from the Graduate School three copies of the form *approval of Thesis Topic and Outline* and submit the completed copies to the adviser for approval by the members of the student's thesis committee. The student's thesis committee chairperson should retain the original copy of the completed form and should return the remaining two copies to the student. The student retains one copy for his or her records and submits the other to the Graduate School in order to be eligible to register for thesis credit under the course heading *Research*. (If the student, with the approval of the thesis committee, changes the thesis topic, revised copies of the above form must be filed).

Students should refer to the course entitled *Research* which appears in the catalog under their major

department and in this section under *Independent Study*, as well as consult with the adviser, relative to the matter of earning credit for research done in conjunction with a thesis. Students must be enrolled in *Research* during any period in which a faculty member is directing the thesis.

Three unbound copies of the approved thesis must be submitted to the Graduate School not later than the completion of all other degree requirements. Each copy must contain an abstract of the thesis. The Office of the Graduate School arranges for the binding of theses. A fee of \$12.00 per copy is charged. Checks should be made payable to Bridgewater State College and submitted to the Graduate School.

Exit Requirements

In order for a student to exit from a graduate program, he or she must satisfactorily complete all credit requirements, as well as pass a Comprehensive Examination.

Comprehensive Examination

All graduate students must take a comprehensive examination that reflects the full range of their program. The design of the Comprehensive Examination must show a relationship to the program and to the program's exit seminar. It is based upon the student's major area(s) of study, as well as related areas, and may include work done on a thesis. Students must give evidence that they can integrate information and ideas from the various areas in which they have studied. The examination may be written and/or oral, as determined by the student's department.

In order to be eligible for a Comprehensive Examination, the student should have completed all of the necessary coursework specified by the major department. A student who plans to take the Comprehensive Examination should file the Graduate School form entitle *Examination Request*, together with a nonrefundable Comprehensive Examination Fee of \$60.00 for master's degree candidates and \$75.00 for CAGS candidates. Checks should be made payable to Bridgewater State College and submitted to the Graduate School. The form should be completed and filed along with the fee no later than the deadline indicated in the college calendar. Comprehensives are given during the months of November and March only.

All students who take the comprehensive examination will be notified of the results by mail in a timely fashion.

Students who fail the Comprehensive Examination shall be given one further opportunity to take it after they have made substantial progress in whatever additional work may be prescribed by the adviser. The student should meet immediately with the faculty adviser or designated person to review weaknesses of the student's performance, and a prescribed program of study should be designed to help guide the student to prepare for the second examination. The student will be allowed the choice of either an oral or written examination when retaking the comprehensive.

Application to Graduate

Students who are nearing the completion of their graduate program requirements and who plan to receive a master's degree or CAGS in January, May, or August, should request the form *Application to Graduate* from the Graduate. This form should be completed by the student and filed, together with the candidate's *Graduate Program Proposal*, approved by the faculty adviser, in the Graduate School no later than the deadline indicated in the college calendar. Failure to file before the deadline will postpone degree conferral. A nonrefundable Commencement Fee of \$11.00 (plus an additional fee of \$25.00 for academic regalia for students attending commencement exercises) is required at the time of filing the *Application to Graduate*. Checks should be made payable to *Bridgewater State College* and submitted to the Graduate School.

No degree or certificate will be conferred and no graduate transcripts will be issued unless all tuition and fees have been paid in full.

Diplomas are awarded at the winter and spring commencements and also at the end of August.

In the event that a student does not receive the degree at the anticipated time, the student should contact the Graduate School Office.

Bridgewater State College

Graduate Program Requirements

Master of Arts

General Requirements — A minimum of thirty approved graduate credits is required for the Master of Arts degree, in addition to a one-credit program planning course to be taken under the direction of an adviser upon acceptance in the program. All credits must have the adviser's endorsement. A thesis is optional in certain Master of Arts programs; students should consult appropriate departmental sections of the catalog for specific program requirements for the degree. For additional details, students should consult the sections in the catalog entitled *Thesis and Independent Study* and request the brochure entitled *The Master's Thesis* from the Graduate School. Ordinarily, at least one-half of the degree credits should be earned in courses limited to graduate students (500 level).

Preliminary Examination — In some departments, a Preliminary Examination is given during the semester following the successful completion of twelve credits (including transfer credits) of approved graduate work. This examination may be written and/or oral. Its purposes are: 1) to determine the degree of skill achieved in relating and integrating graduate work completed to date; 2) to ascertain the readiness of the student for additional graduate work; and 3) to enable the adviser to plan the remainder of the student's program. The Graduate School will apprise students of their performance on the Preliminary Examination. Unsatisfactory performance may require additional course work and a second examination. If a student fails to perform satisfactorily a second time, he or she will be dropped from the degree program.

Research Proficiency Examination — Students are expected to demonstrate competence with a research tool appropriate to their program, such as a reading knowledge of a foreign language, computer programming, or statistics. Students should consult with their adviser and major department relative to specific departmental requirements and procedures.

Comprehensive Examination — All students are required to pass a comprehensive examination. For details, see the paragraph in this section of the catalog entitled *Comprehensive Examination*.

Master of Arts in Teaching

General Requirements — A minimum of thirty approved graduate credits is required for the M.A.T. degree, which is offered through the academic departments of the college, and the Department of Secondary Education and Professional Programs, in addition to a one-credit program planning course to be taken under the direction of an adviser upon acceptance in the program. Students should consult the appropriate departmental sections of this catalog. Degree credits must have the endorsement of the program adviser. A thesis is optional in Master of Arts in Teaching programs. A maximum of six credits may be earned in conjunction with a thesis. The student's work should include results of original research and give evidence of acceptable scholarship. Each student who elects to do a thesis should enroll in the research course (—502) listed under the major department. Students should consult the sections of this catalog entitled *Thesis and Independent Study* and request the brochure entitled *The Master's Thesis* from the Graduate School. Ordinarily, at least one-half of the degree credits should be earned in courses limited to graduate students (500 level).

Course Requirements — The degree of Master of Arts in Teaching is designed for inservice high school teachers, as well as for liberal arts graduates who wish to be certified to teach at the high school level. Emphasis is placed on providing appropriate breadth and depth in the student's field of interest as well as in the field of education. The balance between courses in education and the subject field is determined by the student's background and objectives.

Liberal arts graduates seeking high school teacher certification through the M.A.T. program should consult the *Department of Secondary Education and Professional Programs* section of this catalog for detailed information about program requirements.

Students planning to seek teacher certification under the existing state regulations through Bridgewater State College must successfully complete certification requirements by August 1994.

Inservice teachers, in consultation with their adviser, elect courses which meet their professional needs. Ordinarily, at least 18 graduate credits should be elected from the academic area (and related areas) in which the student is concentrating. In addition, at least one course taken for graduate credit should be elected by inservice teachers from each of the following areas of professional study:

RESEARCH METHODS AND FINDINGS

GC 500 Research and Evaluation

HUMANISTIC STUDIES

ED 360 Aims and Philosophy of High School Education

ED 480 Philosophy of Education

ED 505 Historical Foundations of Education

ED 580 Philosophical Foundations of Education

ED 583 Directed Study in the Philosophy of Education

BEHAVIORAL STUDIES

ED 520 Psychological Foundations of Education

ED 523 Directed Study in Educational Psychology

ED 592 Sociological Foundations of Education

TEACHING THEORY

ED 412 Strategies for Teaching Social Studies
in the High School

ED 414 Strategies for Teaching English
in the High School

ED 416 Strategies for Teaching Earth Sciences
in the High School

ED 417 Strategies for Teaching Geography
in the High School

ED 419 Strategies for Teaching Physical Science
in the High School

ED 421 Strategies for Teaching Biology
in the High School

ED 422 Strategies for Teaching Mathematics
in the High School

ED 424 Strategies for Teaching Foreign Languages
in the High School

ED 425 Strategies for Teaching Art
in the High School

ED 426 Strategies for Teaching Speech & Theatre
in the High School

ED 440 Methods and Materials in Secondary Education

ED 443 Secondary School Curriculum

ED 578 Educational Software Development and
Computer Applications I

SA 571 Introduction to Theory and Understanding of
Group Interaction

Comprehensive Examination — All students are required to pass a comprehensive examination. For details, see the paragraph in this section of the catalog entitled *Comprehensive Examination*.

Teaching Requirement — All students enrolled in a program leading to the degree of Master of Arts in Teaching are required to fulfill the degree requirement of teaching experience. This requirement may be met by one of the following procedures:

1. **CERTIFICATION.** The possession of an appropriate teacher certificate issued by the Department of Education of the Commonwealth of Massachusetts.
2. **TEACHING EXPERIENCE.** One full semester of successful classroom teaching experience at the appropriate level as a full-time employee in an accredited public or private school is ordinarily required. (In order to document this experience, students should submit the completed form entitled *Certificate of Teaching* to the Graduate School. This form is available at the Graduate.)

Master of Education

General Requirements — A minimum of thirty to thirty-six approved graduate credits, depending upon the program, is required for the Master of Education degree, in addition to a one-credit program planning course to be taken under the direction of an adviser upon acceptance in the program. Students should consult the appropriate departmental section of this catalog. Degree credits must have the endorsement of the adviser. A thesis is optional in Master of Education programs. A maximum of six credits may be earned in conjunction with a thesis. The student's work should include the results of original research and give evidence of high scholarship. Each student who elects to do a thesis should enroll in the research course (—502) listed under his major department. Students should consult the sections of the catalog entitled *Thesis and Independent Study* and request the brochure entitled *The Master's Thesis* from the Graduate School. Ordinarily, at least one-half of the degree credits should be earned in courses limited to graduate students (500 level).

Bridgewater State College

Course Requirements — Each program leading to the degree of Master of Education provides graduate students with a curriculum designed to meet their professional needs. Ordinarily, in addition to course work in the area of specialization and related fields, each student must elect for graduate credit at least one course from each of the following:

RESEARCH METHODS AND FINDINGS

Specific course requirements for this area of study are listed under the various departmental M.Ed. program descriptions.

HUMANISTIC STUDIES

ED 480 Philosophy of Education
ED 505 Historical Foundations of Education
ED 580 Philosophical Foundations of Education
ED 583 Directed Study in the Philosophy of Education

BEHAVIORAL SCIENCES

ED 520 Psychological Foundations of Education
ED 523 Directed Study in Educational Psychology
ED 592 Sociological Foundations of Education

Additional M.Ed. course requirements are listed under the various departmental program descriptions in this catalogue. All courses to be offered in fulfillment of degree requirements must be approved by the student's adviser.

Comprehensive Examination — All students are required to pass a comprehensive examination. For details, see the paragraph in this section of the catalog entitled *Comprehensive Examination*.

Certification Information — A number of Bridgewater's Master of Education programs have been approved by the Massachusetts Department of Education for certification of educational personnel. Specific information regarding such programs is provided in this catalog under the School of Education and appropriate departmental program descriptions. For additional details regarding certification program procedures and requirements, students should contact the appropriate graduate program coordinator.

Students planning to seek teacher certification under the existing state regulations through Bridgewater State College must successfully complete certification requirements by August 1994.

Master of Science

General Requirements — The degree of Master of Science is offered in the fields of Computer Science and Physical Education. For information regarding these programs, consult the appropriate departmental sections of this catalog.

Certificate of Advanced Graduate Study (CAGS)

General Requirements — Bridgewater's CAGS programs are designed to meet the well defined career needs of professionals who have earned an appropriate master's degree and who wish to attain greater competency in a combination of areas of study within one of the major CAGS fields — Behavioral Sciences, Creative Arts, Education, or Natural Sciences and Mathematics. Each student's CAGS program will be individually planned under the direction of an adviser and will focus on the academic background, present position, and professional needs of the student, constituting an integrated whole rather than random assortment of courses. By broadening the individual's background, the CAGS aims to develop in the professional increased leadership ability for addressing significant educational and societal issues currently facing the region.

A minimum of thirty approved graduate credits is required for the CAGS, in addition to a one-credit program planning course to be taken under the direction of an adviser upon acceptance in the program. Courses taken for the CAGS may not repeat work previously accomplished by the student in either his or her undergraduate or graduate degree work. Ordinarily, at least one-half of the CAGS credits must be earned in courses limited to graduate students (500 level).

Comprehensive Examination — All CAGS students are required to pass a comprehensive examination. For details, see the paragraph in this section of the catalog entitled *Comprehensive Examination*.

Program and Course Offerings

General Information

The following sections present the academic schools of the college and their departments. Each department's undergraduate and graduate programs are outlined, together with a listing of its course offerings. The following sections present information about programs and course offerings. First the academic school is presented. Each school's section is followed by a presentation of undergraduate and graduate departments and programs, listed in alphabetical order. Individual course descriptions are included in this section under the appropriate headings.

The course offerings include all courses which are taught for academic credit at the college. At present, the majority of the 500 level courses are offered in the evening hours. Students are urged to consult the *Course Offering Brochure* each semester to see when specific courses are offered.

Students should consult the undergraduate or graduate sections of this catalog for information on academic regulations applicable to their degree.

Course Numbering System

- 100 - 299 Introductory courses or courses normally taken during the freshman and sophomore years
- 300 - 399 Courses normally taken in the junior or senior years open to graduate students unless otherwise noted.
- 400 - 499 Courses normally taken by seniors open to graduate students unless otherwise noted.
- 500 - 599 Open only to graduate students.

Courses which may not be taken by graduate students for graduate credit are indicated as part of each graduate program description.

Prerequisites

Students should make certain that they have the necessary prerequisites for each course. Failure to do so may result in being inadequately prepared to take the course, and may result in the loss of any credit earned in the course. Prerequisites are indicated in each course description.

Bridgewater State College

Semester Notations

In some course descriptions, the list of prerequisites is followed by a semester designation indicating when the course can normally be expected to be offered. This information is provided to assist students and their advisers in planning their programs. Please note, however, that all course listings published are subject to change, and that the college reserves the right to cancel courses or sections with inadequate enrollment.

Meeting Times

Unless specified otherwise, day session courses meet for three 50-minute periods or two 75-minute periods per week for one semester, and count for three credits. Departures from this rule, such as laboratory and studio periods and quarter courses, are indicated in the course descriptions and in the schedule of courses.

Courses offered during evening hours normally meet once a week for a three-hour period. Exceptions are noted in the *Course Offering Brochure*.



School of Arts and Sciences

Art
 Biological Sciences
 Chemical Sciences
 Earth Sciences and Geography
 Economics
 English
 Foreign Languages
 History
 Management Science and Aviation Science
 Mathematics and Computer Science
 Music
 Philosophy
 Physics
 Political Science
 Psychology
 Social Work
 Sociology and Anthropology
 Speech Communication, Theatre Arts and Communication Disorders

Dean, School of Arts and Sciences
 Dr. W. Clark Hendley

Academic Departments

Art
 Professor Dorothy M. Pulsifer, Chairperson
Biological Sciences
 Dr. John Jahoda, Chairperson
Chemical Sciences
 Dr. Vahe M. Marganian, Chairperson
Earth Sciences and Geography
 Dr. Jacek K. Sulanowski, Chairperson
Economics
 Professor Anthony Cicerone, Chairperson
English
 Dr. Charles Angell, Chairperson
Foreign Languages
 Dr. Stanley Hamilton, Chairperson
History
 Dr. Gerald J. Doiron, Chairperson

Management Science and Aviation Science
 Dr. Craig Cowles, Chairperson
Mathematics and Computer Science
 Professor I. Philip Scalisi, Chairperson
Music
 Dr. Maxine Asselin, Chairperson
Philosophy
 Dr. Francine Quaglio, Chairperson
Physics
 Dr. George Weygand, Chairperson
Political Science
 Professor Pauline Harrington, Chairperson
Psychology
 Dr. Kenneth A. Wolkon, Chairperson
Social Work
 Dr. David Kemple, Chairperson
Sociology and Anthropology
 Dr. Walter F. Carroll, Chairperson
Speech Communication, Theatre Arts and Communication Disorders
 Associate Professor Arthur L. Dirks, Chairperson

Bridgewater State College

Undergraduate Programs

The School of Arts and Sciences offers undergraduate programs leading to the Bachelor of Arts or Bachelor of Science degree in the following areas. Concentrations are a unified set of courses usually composed of core requirements and of requirements particular to the chosen major concentration. They are indicated below as subheadings. The total number of core and particular requirements must be at least 24 but not more than 36 credit hours, even if students are not required to complete a concentration for graduation. Cognate courses are not counted as part of the 36 hours. Only students selecting the major field of study may complete a concentration within that major. The completed concentration indicated on the student's transcript.

Anthropology	History
<i>Cultural Anthropology</i>	<i>Community</i>
<i>Public Archaeology</i>	<i>Military History</i>
Art	Management Science
<i>Graphic Design</i>	<i>Accounting</i>
<i>Crafts</i>	<i>Energy and Environmental</i>
<i>Fine Arts</i>	<i>Resources Management</i>
Aviation Science	<i>Information Systems</i>
<i>Aviation Management</i>	<i>Management</i>
<i>Flight Training</i>	<i>Finance</i>
Biology	<i>Marketing</i>
Chemistry	<i>Transportation</i>
Professional Chemistry	Mathematics
<i>Biochemistry</i>	Music
Chemistry/Geology	Philosophy
Communication Arts and Sciences	<i>Applied Ethics</i>
<i>Speech Communication</i>	Physics
<i>Communication Disorders</i>	<i>Computer Electronics</i>
<i>Theatre Arts</i>	Political Science
Computer Science	<i>International Affairs</i>
Earth Sciences	<i>Legal Studies</i>
<i>Geology</i>	Psychology
Economics	<i>Industrial Personnel</i>
English	<i>Psychology</i>
<i>Writing</i>	<i>Medical Psychology</i>
French	Social Work
Geography	Sociology
<i>Environmental Geography</i>	<i>Criminology</i>
	<i>Third World Studies</i>
	Spanish

Bachelor of Arts/ Bachelor of Science

The Bachelor of Arts and Bachelor of Science degree programs allow students to select from a number of areas and provide preparation for high school teaching (if high school education is elected as a minor), graduate school, and fields of endeavor related to the major area of study.

Except for students in the Humanities, Creative Arts, or History, a student may decide, after having chosen a major whether to earn a Bachelor of Arts or a Bachelor of Science degree by the selection of free electives. A free elective is any course which is not used to meet the General Education Requirements or major requirements.

Thus, the Bachelor of Science degree is awarded to those who choose the majority of their free electives in the Social and Behavioral Sciences and Mathematics, while the Bachelor of Arts degree is awarded to those who choose the majority of their free electives in the Humanities or Creative Arts.

Students are advised to consult with their department chairperson or major advisor early in their academic career, but not later than the end of the sophomore year, in order to be certain that course selection will allow graduation with the desired degree.

Students seeking admission to the Aviation Science major must pass at least a Class II FAA physical for the concentration in Flight Training or a class III FAA physical for the Aviation Management concentration.

Undergraduate Major

A student must meet all requirements of the major as specified under the departmental listings. A minimum of 24 credits and a maximum of 36 credits within the major may be required by a department. The 24 to 36 credits reflect all courses taken in the major department, including those which are listed under the distribution of General Education Requirements. At least one half of the required courses in the major field (excluding cognate requirements) must be successfully completed at this college. The student should select a major by the end of the sophomore year.

Double Major

In order to graduate with a double major, a student must meet all requirements of both majors sought, without waiver. The student's petition to double major must be made in writing and agreed to by both departments. Official notification of the approval of a double major will be made by the Academic Advising Center. Completion of the double major will be reflected on the final transcript.

Undergraduate Minor

A minor is a unified set of courses chosen outside the major field of study requiring not less than 18 nor more than 21 hours. The minor is recorded on the student's transcript. Minors may include courses from only one department or may be multidisciplinary. Students may use courses which satisfy GER or departmental requirements to fulfill multidisciplinary minor requirements unless otherwise prohibited. At least one half of the courses required for the minor must be successfully completed at this college. Specific requirements for a minor are found under the departmental descriptions. In the School of Arts and Sciences the following minors in specific disciplines or multidisciplinary areas are offered:

American Studies	Mathematics
Anthropology	Music
Art	Philosophy
Art History	Physical Science
Aviation Science	Physics
Biology	Political Science
Biochemistry	Portuguese
Canadian Studies	Psychology
Chemistry	Public Relations
Communication Disorders	Radio and Television Operation and Production
Computer Science	Russian
Dance	Russian and East European Studies
Earth Sciences	Social Welfare
Economics	Sociology
English	Spanish
French	Speech Communication
Geophysics	Theatre Arts
Geography	Urban Affairs
German	Women's Studies
History	
Italian	
Management Science	

Graduate Programs

Graduate programs leading to the Master of Arts, Master of Arts in Teaching, and Master of Science degrees and Certificate of Advanced Graduate Study (CAGS) are offered in the following fields:

Master of Arts

Biology	English
Chemistry	History
Communication Studies	Psychology

Master of Arts in Teaching

Behavioral Sciences	Geography
Biology	History
Chemistry	Mathematics
Creative Arts	Physical Sciences
Earth Sciences	Physics
English	Social Sciences
Foreign Languages	Speech Communication and Theatre

Master of Science

Computer Science

Certificate of Advanced Graduate Study (CAGS)

Behavioral Sciences
Creative Arts
Natural Sciences and Mathematics

Additional information regarding graduate programs, including application procedures and academic requirements, may be found in the *Graduate School* and appropriate departmental sections of this catalog.

Department of Art

Faculty

Chairperson: Associate Professor Dorothy Pulsifer

Professors: John Droege, Roger Dunn, Joan Hausrath, John Heller, William Kendall, Stephen Smalley, Robert Ward

Associate

Professor: Mercedes Nunez

Undergraduate Programs

Bachelor of Arts

The Department of Art offers four areas of study. These include concentrations in:

- Fine Arts
- Graphic Design
- Crafts

and a program of study in Art Education.

Programs on the undergraduate level also provide preparation for graduate study, and offer internships that give first-hand experience in such areas as museology, exhibition planning, community art programs, and graphic design.

Currently, students interested in teaching art must select a minor in High School Education or Elementary Education. However, state mandated requirements for teacher training are subject to change, so it is necessary to consult with either Dr. Stephen Smalley or Professor Dorothy Pulsifer regarding up-to-date requirements. Prospective teachers of art are encouraged to join the

student chapter of the National Art Education Association.

Art majors not interested in an education minor are encouraged to select a minor complementing their interests within the major. Students wishing to minor in art or art history will find a diversity of course offerings suitable to their interests and skills. To insure an appropriate selection of art courses in the major or minor, it is important that each student work closely with his art adviser or the department chairperson in program selection.

It should be noted that a student majoring in art must achieve a grade of C- or better in all of the required courses within the art program, repeating courses if necessary to achieve the required grade.

Students should be aware that typically there will be expenses in studio courses for materials beyond the required fees. Field trips to regional museums and other sites also are regularly a part of many art courses.

A gallery calendar of changing exhibitions is maintained throughout the academic year in the Wallace L. Anderson Gallery within the art building. (One of these exhibitions is the student show, and art majors and minors are encouraged to set aside their best work to submit to this annual showing.) In an adjacent gallery is a continuing exhibition of works from the permanent art collection. These gallery facilities offer a diversity of work that enhances classroom instruction. In addition, visiting artists and related art programs are made possible each year by a generous gift from the class of 1936.

Fine Arts Concentration

AR 125 Drawing I
 AR 130 Two-Dimensional Design
 AR 140 Three-Dimensional Design
 AH 201 Art Survey: Prehistoric, Ancient and Medieval
 AH 202 Art Survey: Renaissance, Baroque and Modern
 AR 225 Drawing II
 AR 230 Painting I
 AR 240 Sculpture I
 AR 255 Printmaking I
 AH 307 20th Century Art and Architecture
 One crafts course from, but not limited to, the following:
 AR 270 Ceramics I
 AR 273 Glass I
 AR 280 Metals I
 AR 290 Weaving I
 AR 291 Tapestry Weaving
 One additional 3-credit art elective.

Graphic Design Concentration

AR 125 Drawing I
 AR 130 Two-Dimensional Design
 AR 140 Three-Dimensional Design
 AH 202 Art Survey: Renaissance, Baroque, and Modern
 AR 225 Drawing II
 AR 230 Painting I
 AR 240 Sculpture I
 AR 260 Introduction to Graphic Design
 AH 307 20th Century Art and Architecture
 AR 361 Graphic Design II
 AR 362 Graphic Design III
 AR 363 Advanced Graphic Design
 Cognate Courses:
 AR 216 Basic Photography
 PY 280 Consumer Psychology
 or
 PL 206 Media Ethics

Admission to the Graphic Design concentration is based on a portfolio review, but graphic design courses may be taken without this review. Normally the review should follow successful completion of AR 260.

Crafts Concentration

AR 125 Drawing I
 AR 130 Two-Dimensional Design
 AR 140 Three-Dimensional Design

AR 230 Painting I
 or
 AR 235 Watercolor Painting I
 AR 240 Sculpture I
 Choose two of the following:
 AH 201 Art Survey: Prehistoric, Ancient and Medieval
 AH 202 Art Survey: Renaissance, Baroque and Modern
 AH 307 20th Century Art and Architecture
 AR 360 The Artist in the Marketplace
 Choose two level I craft courses:
 AR 270 Ceramics I
 AR 273 Glass I
 AR 280 Metals I
 AR 290 Weaving I
 One 300 level crafts course
 One 400 level crafts course

Double Major with Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in Art and Elementary Education, Early Childhood Education or Special Education for certification purposes. Appropriate advising materials with suggested course sequences are available.

Minor in Education (K-9, 5-12)

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific requirements, and consult with the Art Education coordinator, Dr. Stephen Smalley, for additional information.

Art Minor

AR 125 Drawing I
 AR 130 Two-Dimensional Design
 The remaining twelve credits are selected in conjunction with an art adviser.

School of Arts and Sciences

Art History Minor

Not open to art majors.

AH 201 Art Survey: Prehistoric, Ancient and Medieval (required)

AH 202 Art Survey: Renaissance, Baroque and Modern (required)

Select 5 courses from:

AH 203 American Art and Architecture

AH 205 Far Eastern Art

AH 214 Art History Study Tour

AH 302 Greek and Roman Art and Architecture

AH 303 Medieval Art and Architecture

AH 304 Renaissance Art and Architecture

AH 305 Baroque Art

AH 306 19th Century Art and Architecture

AH 307 20th Century Art and Architecture

AH 414 Art History Study Tour (Advanced)

Programs Preparatory to Graduate Study

Scientific and Technical Illustration

Students interested in pursuing scientific illustration at the graduate level should consult the section of this catalog entitled *Multidisciplinary and Pre-Professional Programs* for details.

Art Therapy

For students interested in pursuing Art Therapy at the graduate level, the art department recommends an art major with a minor in psychology, or a psychology major with an art minor.

Graduate Programs

The department of art offers courses at the graduate level as part of the Master of Arts in Teaching and CAGS programs in Creative Arts. A diverse and appropriate program of study in art is ensured when the student works closely with the adviser in course selection. Students applying for the M.A.T. program in creative arts who plan to concentrate in the area of art must have a minimum background of 18 credits in art prior to acceptance.

For more detailed information regarding these programs contact the Graduate School or the chairperson of the Department of Art.

Liberal Arts graduates seeking teacher certification in art should consult the *Department of Secondary Education and Professional Programs* section of this catalog for detailed M.A.T. requirements. For additional information contact the art education coordinator, Dr. Stephen Smalley.

The following departmental offerings may not be taken for graduate credit:
All 100 and 200 level courses; AR 499.

Course Offerings*

AH 101 Introduction to Art (3 crs.)

Emphasis on painting, sculpture, and architecture. Topics include aesthetic principles, artistic styles and their historical contexts, analysis of media and technical processes. A museum visit is assigned. Satisfies the GER in Artistic Modes of Expression. *Either semester*

AH 102 Introduction to Architecture (3 crs.)

Domestic, religious, commercial and governmental buildings throughout history are studied in terms of elements of style, systems and materials of architectural construction, and the symbolic and expressive qualities of buildings. Satisfies the GER in Artistic Modes of Expression. *Either semester*

AH 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman Honors Colloquia in Art allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to all-college honors students and to others at the discretion of the instructor. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) AH 135 fall semester, AH 136 spring semester

AH 201 Art Survey: Prehistoric, Ancient & Medieval (3 crs.)

Major developments in painting, sculpture and architecture are examined from the prehistoric through the late Gothic periods in the Mediterranean area and northern Europe. Emphasis is placed on the evolution of styles and their basis in the needs and values of each culture. A museum visit is assigned. Satisfies the GER in Artistic Modes of Expression. *Either semester*

AH 202 Art Survey: Renaissance, Baroque & Modern (3 crs.)

Major developments in painting, sculpture and architecture are examined from the Renaissance into the modern era in Europe and the United States. Stylistic analysis is integrated with an historical approach. A museum visit is assigned. Satisfies the GER in Artistic Modes of Expression. *Either semester*

AH 203 American Art and Architecture (3 crs.)

Trends in architecture, painting, sculpture and crafts are surveyed from the first colonial settlements in America to the achievements of the present day. Included are vernacular, folk, and regional styles. A museum visit is assigned. Satisfies the GER in Artistic Modes of Expression. *Offered once every three years*

AH 205 Far Eastern Art (3 crs.)

Major achievements in architecture, sculpture, pictorial arts and decorative arts of India, China, and Japan will be the focus of this survey, with some attention given to the other cultures of the Far East. A museum visit is assigned. Satisfies the GER in Non-Western Civilization.

AH 214 Art History Study Tour (6 crs.)

A broad range of topics in the history of art is studied in museums and architectural sites in Europe. Preparatory classwork is conducted on campus prior to travel; assignments and exams

are completed upon return. This course may be taken twice with different itineraries and course topics; please note that only 3 credits may be applied to the General Education Requirements. Satisfies the GER in Artistic Modes of Expression. *Offered summers and intersessions only*

AH 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquia in Art allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to all-college honors students and to others at the discretion of the instructor. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) AH 286 fall semester, AH 287 spring semester

AH 302 Greek and Roman Art and Architecture (3 crs.)

Painting, sculpture, architecture and the minor arts. Historical antecedents and significant cultural influences in art. *Offered once every three years*

AH 303 Medieval Art and Architecture (3 crs.)

A study of painting, architecture, sculpture and minor arts produced in Europe from the time of early Christianity to the Renaissance. Special emphasis on stylistic and cultural influences. *Offered once every three years.*

AH 303 Medieval Art and Architecture (3 crs.)

A study of painting, architecture, sculpture and minor arts produced in Europe from the time of early Christianity to the Renaissance. Special emphasis on stylistic and cultural influences. *Offered once every three years.*

AH 304 Renaissance Art and Architecture (3 crs.)

The development of the arts of architecture, painting, and sculpture in the early and high Renaissance, with special emphasis on their interrelationships and their relation to the artistic theories and cultural ideals of the time. *Offered once every three years*

AH 305 Baroque Art (3 crs.)

Mannerist and Baroque styles of the sixteenth through eighteenth centuries will be studied, with emphasis on their origins in Italy and development through Western Europe. *Offered once every three years*

AH 306 19th Century Art and Architecture (3 crs.)

A study of European art and architecture from Neo-Classicism to Post-Impressionism. Attention given to the historical and cultural settings in which the art was produced. *Offered once every three years*

AH 307 20th Century Art and Architecture (3 crs.)

A study of major movements in art and architecture of the 20th century. Attention given to the theoretical foundations for these modern artistic movements as well as their stylistic distinctions. *Offered alternate semesters*

*See pages 75-76 for general information regarding course offerings.

School of Arts and Sciences

AH 308 Women in the Visual Arts (3 crs.)

This course will address the historical and contemporary perspectives of women artists, their contributions through traditional and non-traditional art forms, and will examine critically the extent to which this talent and art has not been fully recognized nor supported by various cultures and prevailing attitudes.

AH 338/339 Honors Tutorial in Art (3 crs. each semester)

Special Topics in art. Open to All-College and Departmental Honors students. Three hourly meetings weekly. (*Prerequisite: consent of the department honors committee*)

AH 414 Art History Study Tour (Advanced) (3-6 crs.)

A broad range of topics in the history of art is studied in museums and architectural sites in Europe. Preparatory classwork is conducted on campus prior to travel; assignments and exams are completed upon return. This course may be taken twice with different itineraries and course topics. *Offered summers and intersessions only*

AH 485 Honors Thesis in Art (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in a thesis comprising both art works and a written corollary. With the consent of the Departmental Honors Committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Departmental Honors Committee, who will review the results as presented by the student. (*Prerequisite: AH 338, and consent of the Departmental Honors Committee*)

AH 499 Directed Study in Art (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department; formal application required*) *Either semester*

AR 125 Drawing I (3 crs.)

Basic concepts of perspective, modeling in light and dark and contour drawing are explored through various media and techniques including pencil, pen and ink, ink wash and charcoal. Six hours per week. Satisfies the GER in Artistic Modes of Expression (Studio course). *Either semester*

AR 130 Two-Dimensional Design (3 crs.)

Fundamental elements and principles of two-dimensional design, including color, shape, line, texture, balance, space, and the organization of these elements in a work of art are studied through studio exercises. Six hours per week. Satisfies the GER in Artistic Modes of Expression (Studio course). *Either semester*

AR 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman Honors Colloquium in Art allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors

students and to others at the discretion of the instructor. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) *AR 135 fall semester, AR 136 spring semester*

AR 140 Three-Dimensional Design (3 crs.)

Studio projects are concerned with the elements and composition of form and mass in three-dimensional space, including aspects of media, surfaces and dynamics of interacting forms and space. Six hours per week. Satisfies the GER in Artistic Modes of Expression (Studio course). *Either semester*

AR 216 Basic Photography (3 crs.)

This course examines the historical foundations of photography and the fundamentals of photographic techniques such as lenses, lighting, filters and exposure. Through regular shooting assignments in black and white, students develop an ability to appreciate photographic technology and visual aesthetics by making and appraising their own photographs. Students must have access to an adjustable camera. A gallery/museum visit is assigned. Satisfies the GER in Artistic Modes of Expression (Studio course). *Either semester*

AR 225 Drawing II (3 crs.)

Advanced study of drawing style and technique with emphasis on the human figure. Six hours per week. (*Prerequisite: AR 125 or consent of the instructor*) *Either semester*

AR 230 Painting I (3 crs.)

Basic skills, picture organization, and painting techniques applied to assigned problems. Field trips to museums and galleries. Six hours per week. (*Prerequisite: AR 125 and AR 130 or consent of the instructor*) *Either semester*

AR 235 Watercolor Painting I (3 crs.)

Development of transparent watercolor techniques and pictorial composition. Six hours per week. (*Prerequisite: AR 125 or AR 130*) *Either semester, offered once each year*

AR 240 Sculpture I (3 crs.)

Design experimentation with traditional and new problems in a wide range of media. Six hours per week. (*Prerequisite: AR 140 or consent of the instructor*) *Either semester*

AR 255 Printmaking I (3 crs.)

A basic introduction to the fundamentals of the various printmaking processes, intaglio, lithography, silkscreen and relief. Six hours per week. (*Prerequisite: AR 125 and AR 130 or consent of the instructor*)

AR 260 Introduction to Graphic Design (3 crs.)

Introduction to graphic design concepts and creative development. The application of design principles to specific projects dealing with typography, package design, visual design and layout. Six hours per week. (*Prerequisite: AR 130*) *Either semester*

AR 270 Ceramics I (3 crs.)

Introduction to materials and techniques including handbuilding, wheel work, decorating, and firing. Six hours per week. *Either semester*

AR 273 Glass I (3 crs.)

An exploration of the technical, traditional and contemporary, and aesthetic possibilities of glass: copper foil, lead came work, fusing, slumping and enamels. Six hours per week. *(Prerequisite: AR 130 or consent of the instructor) Either semester*

AR 280 Metals I (3 crs.)

Basic design, construction, and forming techniques. Jewelry, constructed forms, sculpture. Six hours per week. *Either semester*

AR 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquium in Art allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. Topics vary from semester to semester. *(Prerequisite: consent of the instructor) AR 286 fall semester; AR 287 spring semester*

AR 290 Weaving I (3 crs.)

Introduction to traditional and contemporary weaving and related techniques. Assigned projects stress the aesthetic combined with the technical considerations of fiberwork. Six hours per week. *Either semester*

AR 315 Drawing/Painting: Coastal Maine Workshop (3 crs.)

A two-week in-residence workshop in coastal Maine where shorelines, ocean, woods, and local villages interact to provide an aesthetic unique to the region. Drawing and/or painting activities will have a particular relationship to the natural surroundings. May be taken twice for a total of 6 credits. *Offered summers only*

AR 316 Intermediate Photography (3 crs.)

This course is for those students who have a basic working knowledge of B&W photography. The student will increase visual awareness through regular shooting assignments and critiques. Included are an introduction to the Zone System, the relationship between exposure, film development and the printing process, print toning, controlling contrast, print finishing, visual composition, and self-critiquing. The student will need an adjustable camera. A hand-held light meter, tripod, and cable release are suggested. *(Prerequisite: AR 216 or consent of the instructor) Fall semester*

AR 318 Photography Techniques (3 crs.)

The student will acquire and practice advanced photography skills. Techniques such as proper print finishing, print toning, preparation of black and white and color slides, use of the copy stand and the fundamentals of color printing are included. This course is recommended for only those students who have taken a basic photography course or its equivalent. *(Prerequisite: AR 216 and consent of the instructor) Offered alternate years, spring semester*

AR 319 Field Experience in Photography (3 crs.)

During the semester, the students will be taken on a series of field trips. While on location, the instructor will assist students in determining good composition, solving problems related to light measurement and determining correct exposure under a variety of conditions. Emphasis will be placed on regular shooting assignments in the field and critiques which will be held on

campus or at a suitable off-campus location. Students must have access to an adjustable camera, a tripod, a cable release, and a gray card. Although not necessary, it is desirable for the student to have a hand-held light meter. *(Prerequisite: AR 216 or consent of the instructor) Offered evenings and summers only.*

AR 325 Advanced Drawing (3 crs.)

Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. This course may be taken three times. Six hours per week. *(Prerequisite: AR 125, AR 225, and consent of the instructor) Either semester*

AR 330 Painting II (3 crs.)

Advanced projects will be planned according to the individual's stylistic development. Six hours per week. *(Prerequisite: AR 230 or consent of the instructor) Either semester*

AR 331 Color Studio (3 crs.)

Color theories will be explored through practical exercises. Topics covered in the course include color wheel systems, the visual properties of color, color mixing in theory and practice, optical color effects, subjective color, and color schemes and harmonies, as well as the theories of Seurat, Kandinsky, Albers, and Goethe. Six hours per week. *(Prerequisite: AR 130)*

AR 335 Watercolor Painting II (3 crs.)

Advanced work in transparent watercolor planned according to the individual's stylistic development. Six hours per week. *(Prerequisite: AR 235 or consent of the instructor) Offered once each year*

AR 338/339 Honors Tutorial in Art (3 crs. each semester)

Special topics in art. Open to All-College and Departmental Honors students. Three hourly meetings weekly. *(Prerequisite: consent of the Departmental Honors Committee)*

AR 340 Sculpture II (3 crs.)

Advanced projects in design and media. Six hours per week. *(Prerequisite: AR 240 or consent of the instructor) Either semester*

AR 351 Printmaking II: Intaglio (3 crs.)

Techniques and aesthetic considerations of etching, engraving, aquatint, and related media, with emphasis on understanding the technical processes of graphic image making. Six hours per week. *(Prerequisite: AR 225 or consent of the instructor) Either semester*

AR 352 Printmaking II: Silkscreen (3 crs.)

An introduction to traditional and innovative serigraph methods: glue, tusche, paper, cut film and photographic stencil. Six hours per week. *(Prerequisite: AR 225 or consent of the instructor) Either semester*

AR 353 Printmaking II: Lithography (3 crs.)

An exploration of the technical and aesthetic possibilities of lithography in black and white and color. Stone lithography, metal plates and paper plates will be utilized. Six hours per week. *(Prerequisite: AR 225 or consent of the instructor) Either semester*

School of Arts and Sciences

AR 354 Printmaking II: Relief (3 crs.)

Techniques and aesthetic considerations of woodblock, wood engraving, linocut, and related media, with emphasis on understanding the technical processes of graphic image making. Six hours per week. *(Prerequisite: AR 225 or consent of the instructor)* Fall semester

AR 360 The Artist in the Marketplace (3 crs.)

The business and professional side of art, and the pursuit and management of a career in art. A study of galleries, museums, and commercial art fields, dealing with aspects of exhibiting and selling work, and the development of relevant business skills. Includes field trips and guest speakers. *Offered alternate years*

AR 361 Graphic Design II (3 crs.)

A more advanced study of graphics, typography, and layout design. Emphasizing the integration of typography and visual imagery to specific assignments. Six hours per week. *(Prerequisite: AR 260)* *Offered once each year*

AR 362 Graphic Design III (3 crs.)

Advanced study in design. Dealing with the integration of illustration, design and typography to specific projects the designer could be expected to work in a studio, agency, or in-house design situation. Two and three dimensional areas are explored. Six hours per week. *(Prerequisite: AR 361)* *Offered once each year*

AR 363 Advanced Graphic Design (3 crs.)

This course examines the application of graphic design and its visual communication to the current problems, and emphasizes the study and recognition of contemporary trends in design, color and visual images as viable means to projects assigned. Two and three dimensional areas are explored, as well as the use of multi-media techniques to project conceptual ideas. Six hours per week. *(Prerequisite: AR 362)* *Offered when needed by a number of students in upper levels*

AR 364 Interior Design (3 crs.)

Form and function of contemporary domestic and commercial spaces. Studio and field experiences related to problem analysis, construction techniques and materials. Six hours per week. *Offered once every three years*

AR 365 Computer Generated Illustration (3 crs.)

The course will offer the student the opportunity to learn the capabilities of the Macintosh computer for desktop publishing as well as training in the creation of new bit mapped and postscript fonts using Fontographer and Fontastic. The student will also learn to use such programs as Typestyler and Letra Studio for the layout and manipulation of type. No prior computer knowledge is required. *(Prerequisite AR 130 or consent of the instructor)*

AR 366 Desktop Publishing and Typography (3 crs.)

Working with the Commodore Amiga computer, students will use both digitized images and paint programs to express their ideas. Emphasis will be on understanding program capabilities, technical aspects of computer use as well as personal expression. Six hours per week. *(Prerequisite AR 260 or consent of the instructor)*

AR 370 Ceramics II: Advanced Projects & Techniques (3 crs.)
Advanced problems and techniques. Six hours per week. *(Prerequisite: AR 270)* *Either semester*

AR 371 Wheel Throwing (3 crs.)

Advanced problems and experience on the potter's wheel, and aesthetics of ceramic design. Six hours per week. *(Prerequisite: AR 270 or consent of the instructor)* *Either semester*

AR 372 Clay and Glazes (3 crs.)

Advanced work in the chemistry and compounding of clay and glaze materials. Six hours per week. *(Prerequisite: AR 270 or consent of the instructor)* *Either semester*

AR 373 Glass II (3 crs.)

Projects will be undertaken under direct supervision of a faculty member to develop techniques included in Glass I, with the addition of slumping, casting, and sand blasting. Six hours per week. *(Prerequisite: AR 273)* *Offered once each year*

AR 380 Metal Design II (3 crs.)

Advanced problems and techniques. Six hours per week. *(Prerequisite: AR 280 or consent of the instructor)* *Either semester*

AR 381 Advanced Jewelry Design (3 crs.)

Specialized techniques for the design and creation of jewelry in precious metals, and experimental construction techniques with these metals. Six hours per week. *(Prerequisite: AR 280 or consent of the instructor)* *Either semester*

AR 390 Weaving II (3 crs.)

Advanced problems and techniques. Six hours per week. *(Prerequisite: AR 290 or consent of the instructor)* *Either semester*

AR 416 Expressive Photography (3 crs.)

During the semester students will thoroughly study photography as an expressive medium. Topics will include personal and impersonal expression, photographic styles, street photography, scenic photography, the nude in photography, photographic abstraction, symbolism in photography, and photographic sequencing. Students will complete a portfolio of photographs that are related to the course topics. The student must have access to an adjustable camera, tripod, cable release, hand-held light meter, and a gray card. *(Prerequisite: AR 216 and AR 316 or consent of the instructor)* *Offered alternate years during the spring semester*

AR 418 Topics in Photography (3 crs.)

Topics of current or special interest in photography. Special topics to be announced prior to registration. This course may be repeated for different topics. *Offered evenings and summers only.*

AR 430 Advanced Painting (3 crs.)

Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. This course may be taken three times. Six hours per week. *(Prerequisites: AR 230, 330, and consent of the instructor)* *Either semester*

AR 440 Advanced Sculpture (3 crs.)

Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. This course may be taken three times. Six hours per week. (*Prerequisite: AR 240, 340, and consent of the instructor*) Offered once each year

AR 450 Advanced Printmaking (3 crs.)

Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. This course may be taken three times. Six hours per week. (*Prerequisite: AR 351, 352, 353, or 354; or consent of the instructor*) Offered once each year

AR 460 Projects in Graphic Design (3 crs.)

This course examines the application of graphic design and its visual communication to current problems, and emphasizes the study and recognition of contemporary trends in design, color and visual images as visible means. Six hours per week. (*Prerequisite: AR 361*)

AR 470 Advanced Ceramics (3 crs.)

Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. This course may be taken three times. Six hours per week. (*Prerequisite: AR 270, 370, and consent of the instructor*) Offered once each year

AR 473 Advanced Glass (3 crs.)

Advanced projects will be undertaken in chosen techniques under direct supervision of a faculty member. This course may be taken three times. Six hours per week. (*Prerequisite: AR 373*) Offered once each year

AR 480 Advanced Metals (3 crs.)

Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. This course may be taken three times. Six hours per week. (*Prerequisite: AR 280, 380, and consent of the instructor*) Offered once each year

AR 490 Advanced Weaving (3 crs.)

Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. This course may be taken three times. Six hours per week. (*Prerequisite: AR 290, 390, and consent of the instructor*) Offered once each year

AR 491 Art Education Seminar (3 crs.)

Limited to seniors who will student teach in Art. Examination of various concepts in art education as well as historical and professional perspectives. Field trips, speakers, and workshops. (*Prerequisite: ED 490 or consent of the instructor*)

AR 492 Topics in Art (3 crs.)

Topics of limited or special interest in art education, art history or studio art. Specific topics to be announced prior to registration. Course may be repeated for different topics. (*Prerequisite: consent of the instructor*) Either semester

AR 498 Internship in Art (3-15 crs.)

A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation. (*Prerequisite: consent of the department chairperson; formal application required*) Either semester

AR 499 Directed Study in Art (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department; formal application required*) Either semester

Other Approved Courses:

AR 291 Tapestry Weaving

AR 300 Methods and Materials in Art: Preschool, K-6

AR 310 Art and the Crafts in Special Education

AR 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

AR 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

AR 514 Art History Study Tour (Advanced) (3-6 crs.)

A broad range of topics in the history of art is studied in museums and architectural sites in Europe. Preparatory classwork is conducted on campus prior to travel; assignments and exams are completed upon return. This course may be taken twice with different itineraries and course topics. Offered summers and intersessions only

AR 530 Advanced Painting (3 crs.)

In the classroom environment, students will move toward individual imagery development including exploration of new media and techniques as appropriate and supported by regular critiques by the instructor. Six hours per week. (*Prerequisite: 6 credits in painting or consent of the instructor*)

AR 540 Advanced Sculpture (3 crs.)

A course designed to challenge the student's grasp of the function and form and its expressive potential through the study of pure form and forms in nature. The materials used are clay, plaster, wood and metal. Six hours per week. (*Prerequisite: 6 credits in sculpture or consent of the instructor*)

AR 550 Advanced Printmaking (3 crs.)

Printmaking for those with previous experience. Course objectives and requirements will be planned on the basis of the individual student's interests and background. Six hours per week. (*Prerequisites: 6 credits in printmaking or consent of the instructor*)

AR 570 Advanced Ceramics (3 crs.)

Work in wheel-throwing, handbuilding, sculptural ceramics, clay technology, glaze chemistry, or studio management in an individualized program depending upon the student's previous course work, abilities, and interests. Six hours per week. (*Prerequisite: 6 credits in ceramics or consent of the instructor*)

School of Arts and Sciences

AR 580 Advanced Metals (3 crs.)

Work in surface embellishment, construction, casting, and forming of non-ferrous metals. Emphasis on experimentation with new technology, materials, and techniques. Six hours per week. *(Prerequisite: 6 credits in metal or consent of the instructor)*

AR 590 Advanced Weaving (3 crs.)

Advanced work in fiber planned in accordance with the student's prior course work and experience. Emphasis given to thorough exploration of color, design, and fiber selection in the execution of technically ambitious projects. Areas of study may include rug weaving, eight-harness double weaves, sculptural weaving and tapestry. Six hours per week. *(Prerequisite: Six credits in weaving or consent of the instructor)*



Department of Biological Sciences

Faculty

<i>Chairperson:</i>	Professor John Jahoda
<i>Professors:</i>	James Brennan, Walter Hewitson, Hardy Moore, Walter Morin, Florian Muckenthaler, Diane Peabody
<i>Associate Professors:</i>	Doraiswami Shanmugasundaram, Sandra Whelan

The department offers an undergraduate program leading to the degree of Bachelor of Arts or Bachelor of Science and a graduate program leading to the degree of Master of Arts or Master of Arts in Teaching. The goal of the undergraduate program is to provide students with broad backgrounds allowing for flexibility in making career choices. Students enrolled in the graduate program have the opportunity to develop their skills and knowledge in more specialized areas.

Undergraduate Programs

Bachelor of Science

A broad background is promoted by a core of 27 credits from the biological, botanical and zoological disciplines along with 26 credits from chemistry, mathematics and physics. Specifically, the following courses or their equivalents (as determined by the department) must be completed:

BI 100 General Principles of Biology
 BI 104 Animal Morphology
 BI 200 Cell Biology
 BI 240 Plant Morphology
 BI 321 Genetics
 BI 341 Plant Physiology
 BI 373 Animal Physiology
 BI 425 Ecology
 BI 428 Microbiology
 CH 131-132 General Chemistry I-II
 CH 343-344 Organic Chemistry I-II
 MA 141 Elements of Calculus I, followed by a one-semester course in calculus (MA 142 is recommended) or statistics or computer science
 PH 181-182 Elements of Physics I-II

The above courses and credits are required of all Bachelor of Science students. In addition, these students must choose three biology electives.

The purpose of the three biology electives is to provide the student with the opportunity to complement the broad background obtained in the biological sciences with further training in an area of individual student

School of Arts and Sciences

interest. Normally, students should try to take the required courses in biology, chemistry, mathematics and physics in the following sequence:

Freshman: 1st semester—BI 100 General Principles of Biology, CH 131 General Chemistry I, MA 141 Elements of Calculus I; 2nd semester—BI 104 Animal Morphology, CH 132 General Chemistry II, MA 142 Elements of Calculus II or statistics or computer science.

Sophomore: 1st semester—BI 240 Plant Morphology, PH 181 Elements of Physics I; 2nd semester—BI 200 Cell Biology, PH 182 Elements of Physics II.

Junior: 1st semester—BI 321 Genetics, BI 341 Plant Physiology; CH 343 Organic Chemistry I; 2nd semester—BI 373 Animal Physiology; Biology Elective, CH 344 Organic Chemistry II.

Senior: 1st semester—BI 425 Ecology, Biology Elective; 2nd semester—BI 428 Microbiology, Biology Elective.

Bachelor of Arts

The B.A. degree represents a minimum training for a Biology major and would be adequate for someone who wishes to be conversant with the subject and use that knowledge in another career goal. Examples of such careers could be in elementary education, science writing, scientific illustration, technical sales, work for a publishing company or similar avocations.

Thirty credits of course work in biology are required with the following stipulations:

- up to 6 credit hours at the 100 level
- up to 6 credit hours at the 200 level
- at least 6 credit hours at the 300 level
- at least 6 credit hours at the 400 level
- directed study, internship, or honors work in biology cannot be counted as part of the 30 required credits. A student may, however, enroll in these as biology courses beyond the 30 credits.
- a maximum of two (2) non-lab courses may be taken as part of the 30 credits at the 200 level or above.

CH 131-132 General Chemistry I-II

Upon completion of the General Education Requirements for the college and the requirements for a major in the biological sciences, a student is left with a number of free elective courses to take, bringing the total number of credits earned to the 120 required for graduation. These free elective courses might be used

most effectively to gain further knowledge and training in the biological sciences or cognate areas, to complete a minor in a discipline other than biology, or to participate in one of the Multidisciplinary Programs (see catalog section, *Multidisciplinary and Pre-Professional Programs*).

Neither GER non-lab courses nor the following courses fulfill any of the requirements for the Biology Major:

BI 171 Human Anatomy and Physiology I
BI 172 Human Anatomy and Physiology II
BI 280 Human Physiology

These courses duplicate material presented in more rigorous biology courses and should not be used as biology elective courses.

Each student majoring in Biology will be assigned an adviser from among the faculty of the department. Students should consult with their advisers frequently to receive academic counseling and to verify that they are completing the requirements for graduation.

STUDENTS WHO HAVE NOT DECLARED A MAJOR AND WHO BELIEVE THEY MIGHT SELECT A MAJOR IN THE BIOLOGICAL SCIENCES SHOULD CONSULT WITH THE DEPARTMENTAL CHAIRPERSON AS SOON AS POSSIBLE. SUCH STUDENTS ESPECIALLY NEED EARLY COUNSELING IF THEY WISH TO GRADUATE IN THE NORMAL FOUR YEAR PERIOD.

Double Major with Elementary and Early Childhood Education or Special Education

Students may choose a double major in Biology and Elementary and Early Childhood Education or Special Education. Appropriate advising materials are available in the biology department office.

Minor in the Biological Sciences

A minor consists of 18-21 credits in biology. Students must take BI 100 General Principles of Biology or BI 102 Introduction to Zoology; BI 104 Animal Morphology; BI 240 Plant Morphology; or their equivalent and three additional courses in biology at or above the 200 level planned in consultation with the chairperson of Biological Sciences.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific teacher certification and program requirements.

Honors Program

The Department of Biological Sciences offers a Departmental Honors Program in Biology. This program provides an opportunity for well-qualified Biology majors to conduct independent research in biology. Contact the Department of Biological Sciences for further information concerning eligibility and application.

Graduate Programs

Master of Arts

The department offers a program leading to the degree of Master of Arts in biology, which is designed to prepare qualified students for research, further graduate study and teaching.

All applicants for the degree must be interviewed by the Departmental Graduate Committee for the purpose of assessing the student's background and determining research interests. If the applicant does not possess an adequate background, he or she may be required to correct deficiencies by enrolling in undergraduate courses without applying credit from those courses towards the graduate program requirements. The committee shall also arrange for meetings with faculty who are likely to be involved in directing research and preparation of the thesis.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. In addition to meeting general degree requirements, the student must complete a minimum of thirty-three appropriate graduate credits in the biological sciences. All courses taken by the graduate student must have the approval of the faculty adviser.

All M.A. students must take the following courses as a core for the degree:

- BI 504 Advanced Seminar in Selected Modern Biological Topics
- BI 506 Advanced Cell Biology
- BI 507 Mechanisms of Development
- BI 508 Advanced Population Biology
- BI 509 Advanced Physiology

In addition, a student will select three courses from the 300, 400 or 500 level courses offered by the department.

After the graduate student completes the core of 15 credits, he must take an oral preliminary exam to determine whether or not any other background courses are needed to aid the student in his research and to determine what electives the student should choose.

At the completion of 15 credits, the student must also successfully pass the language exam or computer or statistics course if determined necessary by his adviser. The student then, with his adviser, needs to work out a thesis outline to be submitted to his thesis committee and the Graduate School.

Upon completion of the elective courses and the thesis, the student must take and pass an oral defense where he is examined on the thesis material.

Students may elect to participate in original laboratory or field research (up to nine of the thirty-three credits) under the direction of a faculty member and to prepare a thesis based on the research. Alternatively, a student may choose to satisfy the research requirement by electing to conduct library research (up to six of the thirty-three credits) on a specific topic and to prepare a thesis based on such research under the direction of a faculty adviser. A student is required to register for BI 502 Research during any term that college facilities are being utilized or faculty supervision is required by the student to conduct research. Research opportunities are available within certain areas of the following general fields:

- | | |
|-----------------------|-------------------------|
| Animal Behavior | Invertebrate Zoology |
| Animal Physiology | Marine Biology |
| Biochemistry | Microbiology |
| Cell Biology | Mycology |
| Cytology | Neurophysiology |
| Developmental Biology | Plant Anatomy |
| Ecology | Plant Morphology |
| Evolution | Plant Physiology |
| Genetics | Ultrastructural Studies |

School of Arts and Sciences

Graduate credit is not given for any 100 and 200 level courses.

Master of Arts in Teaching

The department offers a program leading to the degree of Master of Arts in Teaching, which is designed for in-service teachers and others preparing to teach at the secondary level. All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. Students enrolled in the program must meet the general requirements for the degree (including 12 hours of course work selected from the four areas of professional study in education— consult the Graduate School section of this catalog), plus the departmental requirements (a minimum of 21 semester hours of courses in the biological sciences).

Liberal arts graduates seeking high school teacher certification through the M.A.T. program should consult the Department of Secondary Education and Professional Programs section of this catalog for detailed information about requirements.

All M.A.T. students must take as a core the following courses:

BI 506 Advanced Cell Biology
BI 507 Mechanisms of Development
BI 508 Advanced Population Biology
BI 509 Advanced Physiology

The remaining three courses (9 credits) may be taken in any area after consultation with the adviser. All courses taken for graduate credit must be at the 300, 400, or 500 level. When all course work is completed, the M.A.T. candidate must take a written and/or oral comprehensive exam entailing questions from the courses he has taken as well as questions in the general area of biology that the department feels an M.A.T. student should know to teach biology successfully.



Course Offerings*

BI 100 General Principles of Biology (3 crs.)

The biological principles at the cellular and organismal levels are discussed. The topics covered include cell structure, respiration, photosynthesis, osmosis, enzymes, DNA and protein synthesis, genetics, ecology and evolution. Two hours of lecture and one two-hour laboratory period weekly. Satisfies the GER in Physical and Biological Sciences. *Either semester*

BI 102 Introduction to Zoology (3 crs.)

This course considers the zoological aspects of biology with emphasis on human systems. Topics include the chemical basis of life, the structure and physiology of cells, tissues, organs, and organ-systems, embryonic development, heredity, evolution and ecology. Two hours of lecture and one two-hour laboratory period weekly. Satisfies the GER in Physical and Biological Sciences. *Either semester*

BI 104 Animal Morphology (3 crs.)

A survey of the animal kingdom including major invertebrate phyla and the phylum chordata. This course will include a taxonomic and evolutionary analysis of the functional morphology, systematics and basic biology of the major animal phyla. Two hours of lecture and one two-hour laboratory period weekly. *Spring semester*

BI 106 Introductory Plant Science (3 crs.)

An introduction to the structure and function of flowering plants through an analysis of the gross morphology and microscopic anatomy of stems, roots, leaves, flowers, fruits and seeds; major intracellular chemical processes; intercellular physiology of whole plant processes; growth and reproduction. Two hours of lecture and one two-hour laboratory period weekly. Satisfies the GER in Physical and Biological Sciences. *Either Semester*

BI 109 Introduction to Human Disease (3 crs.)

The fundamental concepts of modern biology will be presented through an examination of both infectious and inherited diseases. The interactions of various infectious agents with, and the response of, the human body will be examined at the molecular and cellular level. Principles of genetics and biochemistry will be utilized to describe inherited diseases. Other topics will include the immune system, cancer, transmission of disease, and specific treatments. Satisfies the GER in Physical and Biological Sciences. (non-lab course) *Either Semester*

BI 110 Biology: A Human Approach (3 crs.)

This course examines biological principles as they apply to human biology and to the role of humans in nature. A study of different levels of organization leads to analysis of the structure and function of the major systems of the human body. Topics will include human heredity, evolution and ecology. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Spring semester*

BI 111 Human Heredity (3 crs.)

The principles of genetics which are important to an understanding of the hereditary mechanism in humans. Individual differences in relation to gene-environment interaction and the role of heredity in education, governance, and society. Primarily an elective for non-science majors. Satisfies the GER in Physical and Biological Sciences (non-lab course) *Spring semester*

BI 112 Biology and Human Thought (3 crs.)

The evolutionary development of the brain, its organization and functions will be discussed. Major emphasis will be devoted to neuronal cell conduction and transmission and the cellular basis for movement, sensory activity, emotions, memory and brain disorders. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Fall semester*

BI 113 Fundamentals of Biology (3 crs.)

The conceptual foundations of modern life science are introduced through a detailed historical study of five core subjects: cell biology, genetics, development, evolution and ecology. The current status of knowledge and methodology will be discussed. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Either semester*

BI 114 Horticulture (3 crs.)

This course examines the interactions among plant structure, function and environmental factors as they relate to the growth, propagation and utilization of cultivated plants. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Fall semester*

BI 115 Microbial World and You (3 crs.)

This course studies microorganisms (bacteria, algae, fungi, protozoa, and viruses) and their interactions with humans. The principles and applications of environmental, industrial and medical microbiology are discussed. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Either semester*

BI 116 Drugs of Plant Origin (3 crs.)

The formation, identity, and specific effects of plant materials that influence the course of human disease, discomfort and well-being are considered. The subject matter includes the major groups of organisms as well as principal biological subfields such as ecology, evolution, taxonomy, anatomy, physiology and biochemistry. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Offered once in three years.*

BI 117 The Biological Environment (3 crs.)

The ecological relationship between humanity and other forms of life is discussed in biological terms. Topics dealing with humanity's past, present and future role in the ecosystem are discussed and might include: energy, biogeochemical cycles, population dynamic, endangered species, climate change, and waste management. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Fall semester*

BI 118 Evolution (3 crs.)

The theory of evolution with its supporting evidence and mechanisms of change is presented. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Offered alternate years*

* See pages 75-76 for general information regarding course offerings.

School of Arts and Sciences

BI 135-136 Freshman Honors Colloquium (1 cr. each semester)
Freshman Honors Colloquia in Biology. This course allows exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) BI 135 Fall semester, BI 136 Spring semester

BI 171 Human Anatomy and Physiology I (4 crs.)
Principles of cellular and general physiology; cell, tissue and organ structure; structure and function of the skeletal, muscular and nervous systems will be discussed. Three hours of lecture and one two-hour laboratory period weekly. *Fall semester*

BI 172 Human Anatomy and Physiology II (4 crs.)
The structure and function of the circulatory, excretory, digestive, respiratory and endocrine systems. Intermediary metabolism and reproduction will be discussed. Three hours of lecture and one two-hour laboratory period weekly. (*Prerequisite: BI 171 or consent of the instructor*) *Spring semester*

BI 200 Cell Biology (3 crs.)
This course is an introduction to the basic concepts in cell structure and cell physiology. Topics will include the function of cellular organelles, enzymes and cell metabolism, the synthesis of macromolecules, and the flow of genetic information in the cell, including transcription and translation. Two hours of lecture and one two-hour laboratory period weekly. (*Prerequisite: BI 100 and CH 131-132 or CH 141-142; or consent of the instructor*) *Spring semester*

BI 240 Plant Morphology (3 crs.)
A survey of the plant kingdom from the monera through the angiosperms with emphasis on evolutionary adaptations associated with each group and phylogenetic relationships between the divisions as reflected in present day classification systems will be covered. Two hours of lecture and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent or consent of the instructor*) *Fall semester*

BI 272 Animal Behavior (3 crs.)
This introduction to the study of animal behavior from the biological viewpoint covers such topics as drives and reflexes, animal communication, biological rhythms and migration. Emphasis will be placed where applicable on the relationships between animal and human behavior. (*Prerequisite: BI 100 or equivalent, or consent of the instructor*) *Offered alternate years*

BI 280 Human Physiology (3 crs.)
General physiological principles and their application to the human body. Two hours of lecture and one two-hour laboratory period weekly. (*Prerequisite: BI 102 or consent of the instructor*) *Either semester*

BI 282 Comparative Chordate Anatomy (3 crs.)
An ontogenetic and phylogenetic survey of chordate gross anatomy, supplemented by laboratory dissections of representative species. Emphasis is placed on ecomorphology and the changes in chordate structure and biology that comprise their evolution, with an analysis of the significance of these changes in light of our modern knowledge of evolution. Two hours of lecture and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent, or consent of the instructor*) *Spring semester*

BI 284 Invertebrate Zoology (3 crs.)
The biology of invertebrates from a phylogenetic standpoint with emphasis on taxonomy, morphology, physiology, development, and natural history. Representatives of the principal classes of each phylum are studied. Two hours of lecture and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent, or consent of the instructor*) *Spring semester*

BI 286-287 Sophomore Honors Colloquium (1 cr. each semester)
Sophomore Honors Colloquia in Biology allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) BI 286 Fall semester, BI 287 Spring semester

BI 320 Biochemistry (3 crs.)
A study of the characteristics and metabolism of biological molecules. Topics include enzyme structure and function; techniques of enzyme study; anabolic and catabolic pathways and their regulation; and applications of thermodynamics and kinetics to biological systems. (*Prerequisite: BI 200, CH 131-132; MA 141; or consent of the instructor. BI 341 or BI 373 recommended.*) *Either semester*

BI 321 Genetics (3 crs.)
Analysis of the basic principles underlying heredity and the mechanisms involved in the replication, recombination, mutation, variation and expression of genetic material in representative plant, animal and microbial systems. Two hours of lecture and one two-hour laboratory period weekly. (*Prerequisite: BI 104, BI 240; CH 131-132; MA 141; or consent of the instructor*) *Fall semester*

BI 323 Virology (3 crs.)
This course is an introduction to the study of viruses including bacteriophages, animal and plant viruses. Viral structure and mechanisms of action are considered at the molecular level, and emphasis is placed on viral replication and host cell interactions. (*Prerequisite: BI 200, and CH 131-132 or CH 141-142*) *Fall semester*

BI 326 Marine Biology (3 crs.)

An introduction to the marine ecosystems with emphasis on factors involved in the growth, diversity, and distribution of populations occupying the marine habitats of the eastern Atlantic coast. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: BI 100 or equivalent, or consent of the instructor) Offered once in three years

BI 338-339 Honors Tutorial (3 crs. each semester)

Special topics in biology. Open to All-College and Departmental Honors students. Three hourly meetings weekly. (Prerequisite: consent of the department) BI 338 Fall semester, BI 339 Spring semester

BI 341 Plant Physiology (3 crs.)

The growth and function of plants including cellular physiology, water relations, metabolism, respiration, photosynthesis, nutrition, growth regulation, and the influence of environment. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: BI 200, BI 240; CH 131-132 or CH 141-142; or consent of the instructor) Fall semester

BI 344 Biology of the Fungi (3 crs.)

A study of the fungi with emphasis on morphology, physiology, and genetics. (Prerequisite: BI 104 or BI 240; CH 131-132 or equivalent; or consent of the instructor) Either semester

BI 371 Histology (3 crs.)

A study of the microscopic anatomy of mammalian tissues and organs with emphasis on human materials. The study of prepared slides in the laboratory will serve as a basis for discussion of the interdependence of structure and function in the animal body. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: BI 104; CH 131-132 or consent of the instructor) Offered alternate years

BI 373 Animal Physiology (3 crs.)

Physiological principles concerned in irritability, contraction, circulation, gas exchange, excretion, and hormonal regulation. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: BI 104; CH 131-132 or equivalent; or consent of the instructor) Spring semester

BI 375 Immunology (3 crs.)

The immune system and its components, including their structure, function, genetics and ontogeny. (Prerequisite: BI 321; BI 172 or BI 280 or BI 371 or BI 373) Offered alternate years, Spring semester

BI 376 General Endocrinology (3 crs.)

A survey of the morphology, ultrastructure, and physiology of endocrine glands and their hormones, in animals with special emphasis on humans, will be presented. The course will discuss the hormonal action of their control on the cellular and organ level. (Prerequisite: BI 104) Offered alternate years, Fall semester

BI 390 Introduction to Pharmacology (3 crs.)

Introduction to the basic concepts in pharmacology which are important for the understanding of the interaction between chemical agents and the human organism. Types and frequencies of adverse reactions will be reviewed. Specific classes of drugs will be reviewed. Specific classes of drugs will be examined including CNS, cardiovascular, and antimicrobial agents acting on the autonomic nervous system and hormones. Examples of the use of these basic concepts and the application of specific agents in the treatment of disease will be taken from the literature. (Prerequisite: BI 280 or BI 171)

BI 400 Molecular Biology (3 crs.)

This course will examine the molecular nature of biological processes. The structure and function of biological macromolecules will be examined along with the research methodologies and techniques currently utilized in this field. Emphasis will be placed on the mechanisms which regulate the flow of genetic information in both cells and viruses. (Prerequisites: BI 200; BI 321) (Does not satisfy the department's MA/MAT program)

BI 410 Techniques of Molecular Biology (3 crs.)

This laboratory course will focus on techniques in recombinant DNA technology, as well as introduce students to procedures utilized in animal cell culture and protein analysis. One hour of lecture and four hours of laboratory weekly. (Prq: BI 200, BI 428 and CH 343-344)

BI 425 Ecology (3 crs.)

The dynamics and evolution of populations, communities, and eco-systems. Students become acquainted with the communities of southeastern Massachusetts through field studies. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: BI 100, BI 321; or consent of the instructor) Fall semester

BI 428 Microbiology (3 crs.)

An introduction to the structure, metabolism, and genetics of microorganisms with emphasis on bacteria and fungi. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: At least junior standing with 15 credits in biology courses.) Spring semester

BI 430 Embryology (3 crs.)

A study of developmental processes at different levels of organization with emphasis on animal development. Topics include gametogenesis, fertilization, early embryonic development, organogenesis, differentiation, growth and regeneration. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: BI 104; CH 131-132; or consent of the instructor) Offered alternate years, Spring semester

BI 433 Cytology (3 crs.)

Cellular morphology and organization including descriptions of major intracellular processes and the functional significance of cellular structures. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: BI 200, or consent of the instructor) Fall semester

School of Arts and Sciences

BI 434 Biological Electron Microscopy (3 crs.)

An introduction to the techniques of tissue preparation including fixation, dehydration and embedment procedures, followed by sectioning and staining, practical use of the electron microscope and interpretation of electron photomicrographs. Basic principles of tissue preparation and applications of electron microscopy will be stressed. One hour of lecture and one four-hour laboratory period weekly. (*Prerequisite: BI 200 or consent of the instructor*) *Spring semester*

BI 435 Problem Solving with the Computer in Biology (3 crs.)

The solution of mathematical problems in various areas of biology with the computer. Identification and analysis of problems followed by algorithm construction and preparation of effective computer programs. An introduction to significant problem solving with the computer in areas such as genetics, population biology, microbiology, and physiology. (*Prerequisite: At least junior standing with 15 credits in biology courses.*) *Offered once in three years*

BI 472 Human Genetics (3 crs.)

The general principles of genetics as applied to humans. Emphasis will be placed on the determination of genotypes, predictions for future offspring, pedigree construction and analysis, diagnosis and treatment of genetic diseases, gene mapping, cytogenetics of normal and aberrant genomes, and population genetics. (*Prerequisite: BI 321 or consent of the instructor*) *Offered once in three years*

BI 482 Neurobiology (3 crs.)

The study of the ultrastructure, chemical and physiological properties of the invertebrate and vertebrate neuron such as membrane potentials, synaptic transmission, growth and aging. Sensory and motor functions of nerves; reflex mechanisms; autonomic nervous functions; and central nervous system functions such as the limbic or emotional brain; learning and memory; regulation of biological clocks and autonomic functions will be covered. (*Prerequisites: CH 131-132, a physiology course and/or consent of the instructor*)

BI 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the Departmental Honors Committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Departmental Honors Committee. *Either semester*

BI 498 Internship in Biology (3-15 crs.)

Internships include research, laboratory or occupational experience in industrial, allied health, educational, medical, governmental, recreational, regulatory or other organizations outside of the college. No more than six (6) credits may be used toward the biology major electives. (*Prerequisite: consent of the department*) *Either semester*

BI 499 Directed Study in Biology (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department*) *Either semester*

Other Approved Courses:

BI 211 Landscaping
BI 212 Plant Propagation
BI 241 Plant Anatomy
BI 273 Vertebrate Zoology
BI 324 Microscopical Technique
BI 421 Seminar in Biology
BI 422 Biological Evolution
BI 475 Parasitology

BI 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

BI 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

BI 504 Advanced Seminar in Selected Modern Biological Topics (3 crs.)

A study of significant recent work in a specific area of biological research. Students will be expected to do considerable library research, make oral presentations, and present a satisfactory written summary of their work.

BI 506 Advanced Cell Biology (3 crs.)

This course will focus on various aspects of cellular regulation. Topics will include: control of transcription in procaryotic and eucaryotic cells, mechanisms of protein synthesis and degradation, cellular responses to external factors. The approach will involve examination of these and other areas of cellular physiology at the molecular level. (*Prerequisites: BI 200, BI 321, CH 344, CH 461 recommended, or consent of the instructor*)

BI 507 Mechanisms of Development (3 crs.)

The student will come to understand in this course what is currently known about the major processes that occur when a single-cell zygote develops into a complex organism. Cell differentiation, differential gene expression and cell interaction are major topics in the course. (*Prerequisites: BI 321, CH 131-132*)

BI 508 Advanced Population Biology (3 crs.)

This course offers an advanced coverage of population biology. Population biology encompasses all investigations above the level of the individual. Population biology is the study of the structure, integration and evolution of groups of organisms belonging to one or more species. Included are considerations of intrapopulational phenomena, interactions between populations and community and ecosystem interactions. Population genetics and population ecology will be considered in detail. In the development of a unified theory of populations, considerations will be given of other disciplines such as ethology, paleontology,

environmental physiology, demography, and systematics. (Prerequisite: BI 104, 240 or consent of the instructor)

BI 509 Advanced Physiology (3 crs.)

Advanced consideration of topics in animal and plant function, including selected aspects of enzyme structure and function, transport at the molecular and organismal levels, photosynthetic and respiratory metabolism, stress, hormonal and electrical communication, and movement. (Prerequisites: CH 131-132, BI 200 and a physiology course. CH 343-344 and MA 141 recommended.) Fall semester

BI 521 Advanced Cellular and Molecular Techniques (3 crs.)

This course provides in depth laboratory experience along with background theory for selected techniques such as: transformation with plasmids, isolation, purification and assay of macromolecules; tissue and cell culture; and radioisotopic technique. One lecture and four hours of laboratory weekly. (Prerequisites: BI 200, BI 321, BI 373, CH 344 or consent of the instructor)

BI 523/BI 524 Marine Mammal Science for the Grades 5-8 Teacher (3 crs. each semester)

An introduction to and practical application of marine mammal science for the grades 5-8 teacher. A determined effort will be made to include materials which are relevant to a grades 5-8 program. This program will introduce cetacean biology and ecology into the grades 5-8 curriculum. In this program we will emphasize the use of mathematics in science. Participants will use mathematical and statistical analysis to evaluate whale behavior, to chart movements of whales and to demonstrate population parameters. This information will then be adapted for classroom use. (Prerequisite: introductory science courses or consent of the instructor)

BI 532 Ultrastructure (3 crs.)

A comparison of representative plant, animal and fungal cellular ultrastructure. After fixation, embedment, sectioning and staining of sections from each group, students will be expected to obtain photographs exhibiting cellular organelles, mitotic and meiotic events, and tissue structures showing major features of each. Literature study of methods and interpretation of micrographs. One hour of lecture and three hours of laboratory per week. (Prerequisites: BI 200 and/or BI 433)

BI 551 Advanced Mycology (3 crs.)

Aspects of growth, physiology, morphogenesis and genetics of representative fungi as related to fungal evolution and ecology will be discussed. Two hours of lecture and one two-to-four-hour laboratory period weekly. (Prerequisites: BI 200, BI 321, BI 344, BI 428 or consent of the instructor)

BI 580 Foundations of Biological Education (3 crs.)

An exploration of the historical underpinnings of biological education and the integration of modern philosophical foundations of biological education with classroom practice.

BI 582 Clinical Master's Research and Thesis

The development and implementation of a research project concerning theories and practice of learning and teaching biology. An acceptable thesis describing the project will be prepared by the student.

Other Approved Courses:

BI 537 Intertidal Biology

BI 550 Modern Developments in Biology

BI 573 Advanced Vertebrate Biology

BI 580 Foundations of Biological Education

BI 581 Mammalogy

BI 582 Clinical Master's Research and Thesis

BI 584 Ethology

BI 585 Ichthyology



Department of Chemical Sciences*

Faculty

Chairperson: Professor Vahe Marganian

Professors: Wilmon Chipman, Henry Daley, Jr.
Margaret Souza

**Assistant
Professor:** Joseph Pagano

The Department of Chemical Sciences offers programs leading to the degrees of Bachelor of Arts in Chemistry, Bachelor of Science in Chemistry, Master of Arts in Chemistry and Master of Arts in Teaching Chemistry. All of these programs are designed to provide the skills and knowledge necessary to prepare students for successful careers in the chemical industry, chemical research, teaching, oceanography and environmental science, or for further study in graduate degree programs.

Undergraduate Programs

Bachelor of Arts/ Bachelor of Science

The department offers two major programs in Chemistry, a concentration in Biochemistry and also a Chemistry-Geology major jointly with the Department of Earth Sciences and Geography. The Professional Chemistry major and the Biochemistry concentration are

*The Department of Chemical Sciences is on the list of approved schools of the American Chemical Society.

designed for students who plan to go on to graduate work in chemistry or to do research in the chemical industry. The courses offered in these programs meet the requirements of the American Chemical Society* for an approved major. Satisfactory performance in these programs (B average) will give the student the professional preparation required for an assistantship or fellowship in graduate school. The second major, the major in Chemistry, is designed for students who wish to prepare for such fields as medicine, dentistry, the chemical industry, secondary school teaching, chemical sales, pharmacy, oceanography, environmental sciences, sanitation chemistry, or veterinary science. Only a minimum number of chemistry courses is required so that a program suited to an individual's interests may be developed with the student's faculty adviser.

The department offers studies to students preparing for careers in medicine, dentistry, or oceanography. Additional information on these programs may be found in the catalog under *Multidisciplinary and Pre-Professional Programs*.

Professional Chemistry Major

CH 100 Computer Science in Chemistry
or
CS 100 Programming in Basic
CH 141-142 Chemical Principles I-II
or
CH 131-132 General Chemistry I-II
CH 241 Inorganic Quantitative Analysis
CH 242 Intermediate Inorganic Chemistry
CH 343-344 Organic Chemistry I-II
CH 381-382 Physical Chemistry I-II
CH 392 Laboratory Techniques
CH 444 Advanced Inorganic Chemistry
CH 450 Instrumental Analysis
MA 151-152 Calculus I-II
MA 201 Calculus III
MA 316 Differential Equations
PH 243-244 General Physics I-II

A student must also elect one advanced course, which must be in chemistry at or above the 390 level and have CH 344 Organic Chemistry II and CH 382 Physical Chemistry II as prerequisites; making sure that the program contains 500 hours of laboratory instruction with 150 hours of laboratory at the advanced level. (Elective courses must be approved by the adviser.)

Biochemistry Concentration

CH 100 Computer Science in Chemistry
or
CS 100 Programming in Basic
CH 141-142 Chemical Principles I-II
or
CH 131-132 General Chemistry I-II
CH 343-344 Organic Chemistry I-II
CH 381-382 Physical Chemistry I-II
One of the following three courses:
CH 241 Inorganic Quantitative Analysis
CH 250 Instrumentation
CH 450 Instrumental Analysis
CH 461-462 General Biochemistry I-II
CH 444 Advanced Inorganic Chemistry
CH 466 Advanced Biochemistry Laboratory
BI 100 General Principles of Biology
BI 200 Cell Biology
BI 321 Genetics
BI 428 Microbiology
MA 151-152 Calculus I-II
or
MA 141-142 Elements of Calculus I-II

PH 243-244 General Physics I-II
or
PH 181-182 Elements of Physics I-II

Chemistry Major

CH 100 Computer Science in Chemistry
or
CS 100 Programming in Basic
CH 141-142 Chemical Principles I-II
or
CH 131-132 General Chemistry I-II
CH 242 Intermediate Inorganic Chemistry
CH 343-344 Organic Chemistry I-II
CH 381-382 Physical Chemistry I-II
MA 151-152 Calculus I-II
or
MA 141-142 Elements of Calculus I-II
with the permission of the adviser
PH 243-244 General Physics I-II
or
PH 181-182 Elements of Physics I-II
with the permission of the adviser

Chemistry/Geology Major

A major in Chemistry-Geology is offered jointly with the Department of Earth Sciences and Geography. (See the catalog section entitled *Multidisciplinary and Pre-Professional Programs* for detailed information).

Double Major with Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in Chemistry or Chemistry-Geology and Elementary Education, Early Childhood Education or Special Education for certification purposes. Please contact the Department of Chemistry and the appropriate education department for further information.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific teacher certification and program requirements.

School of Arts and Sciences

Chemistry Minor

18 credits in chemistry.

Only one of the following sequences or its equivalent may be taken for credit:

(a) CH 125-126 Introductory Chemistry for the Life Sciences I-II

(b) CH 131-132 General Chemistry I-II
or

(c) CH 141-142 Chemical Principles I-II

Students may not take both CH 300 Organic Chemistry for the Life Sciences and CH 343-344 Organic Chemistry I-II for credit. CH 111 The Art of Chemical Inquiry may not be used to fulfill minor requirements in chemistry.

Biochemistry Minor

18-20 credits in chemistry.

The following sequences of courses must be taken:

CH 343-344 Organic Chemistry I-II

CH 461-462 General Biochemistry I-II

Physical Science Minor

18 credits in chemistry and physics.

Additional Comments on Requirements:

The normal freshman program for a student interested in either chemistry major consists of CH 100 Computer Science in Chemistry (or CS 100 Programming in Basic), CH 141-142 Chemical Principles I-II, MA 151-152 Calculus I-II, and six credits toward the general education requirements. A student need not decide between the two chemistry majors until the second semester of the sophomore year. Students completing the Professional Chemistry major will meet the requirements for certification by the American Chemical Society.

Because of the sequential nature of the courses required of a chemistry major, a student considering majoring in chemistry must take MA 151-152 Calculus I-II (or MA 141-142 Elements of Calculus I-II with the permission of the adviser) and CH 141-142 Chemical Principles I-II in the freshman year or plan to attend summer school. For this reason any student considering the possibility of majoring in chemistry should consult a member of the department before registering for freshman courses.

Graduate Programs

Master of Arts

The Department of Chemical Sciences offers a program leading to the degree of Master of Arts in Chemistry, which is designed to prepare qualified students for research, further graduate study, and teaching. An undergraduate major in chemistry, or its equivalent, is normally required for admission to this program. Applicants must have satisfactorily completed the following: one semester of differential calculus, one semester of integral calculus, two semesters of calculus based physics, two semesters of general chemistry with laboratory, one semester of analytical chemistry, two semesters of organic chemistry and two semesters of physical chemistry. Other laboratory courses in chemistry are desirable.

Applicants must have an interview with the chairman of the department.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog: In addition to meeting general degree requirements, the student must complete at least 30 graduate credits in chemistry which shall include at least three semester hours of thesis credit (CH 502). All courses must be approved by the adviser.

The department offers two tracks which can be used to complete the degree requirements: a laboratory research track and a non-laboratory research track.

In both tracks, each graduate student must satisfactorily complete the following core curriculum or present evidence that it has been successfully completed.

Core Curriculum:

CH 444 Advanced Inorganic Chemistry

CH 450 Instrumental Analysis

CH 591 Advanced Organic Chemistry I

CH 592 Advanced Organic Chemistry II

CH 597 Advanced Physical Chemistry I

CH 598 Advanced Physical Chemistry II

For the non-laboratory research track a graduate course in biochemistry must be taken as part of the required core curriculum.

A reading knowledge of German or Russian (or, if approved, a demonstrated competence with another appropriate research tool, such as computer programming) is required for the degree.

The departmental offerings listed below include the following courses which may not be used to meet M.A. degree requirements:

Any chemistry courses numbered below 400; CH 499 Directed Study in Chemistry; CH 585 Atomic and Molecular Structure.

Master of Arts in Teaching

The Department of Chemical Sciences offers programs leading to the degree of Master of Arts in Teaching with concentrations in Chemistry and Physical Science. All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the *Graduate School* section of this catalog), and a minimum of 18 appropriate graduate credits in chemistry (approved by the program adviser on the basis of the background, interests, and needs of the student).

Liberal Arts graduates seeking high school certification through the M.A.T. program should consult the *Department of Secondary Education and Professional Programs* section of this catalog for detailed requirements.

The departmental offerings listed below include the following courses which may not be taken for graduate credit:

All courses at the 100 level
CH 210 Chemistry and Society
CH 390 Research Problems in Chemistry
CH 499 Directed Study in Chemistry



School of Arts and Sciences

Course Offerings*

CH 100 Computer Science in Chemistry (2 or 3 crs.)

Introduction to computer programming as used in chemistry. Particular emphasis will be on applications of BASIC for statistical studies. A special project will be assigned to those electing this course for three credits. *Spring semester*

CH 102 Chemistry in Everyday Life (3 crs.)

A selection of topics from the multitude of chemical and nuclear reactions encountered in the everyday life of the modern person will be presented through lectures and demonstrations. Topics such as the following may be included: evaluation of energy alternatives, radioactive isotopes in diagnosis and treatment of disease, risk-to-benefit evaluation of food additives and environmental impact of chemical waste disposal. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Either semester*

CH 111 The Art of Chemical Inquiry (3 crs.)

The underlying principles governing the interactions of molecules, whether simple or complex, will be developed and applied to the investigation of phenomena such as the following: air and water pollution, nuclear power generation, fires and their control, crystal formation and the use of food additives. Two hours of lecture and one two-hour laboratory period weekly. Satisfies the GER in Physical and Biological Sciences. *Either semester*

CH 125 Introductory Chemistry for the Life Sciences I (4 crs.)

A study of the fundamental principles of general, organic and biological chemistry and their applications to physiological systems. Primarily for students of nursing and the allied health professions. Three hours of lecture and one two-hour laboratory period weekly. (Prerequisite: high school chemistry or the equivalent) *Fall semester*

CH 131-132 General Chemistry I-II (3 crs. for each semester)

The elements and their compounds will be studied with emphasis on structure and its relationship to properties. Two hours of lecture and one two-hour laboratory period weekly. *CH 131 is prerequisite to CH 132. CH 131 only satisfies GER in Physical and Biological Sciences. CH 131 fall semester, CH 132 spring semester*

CH 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman honors colloquia in chemistry allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to all-college honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (Prerequisite: consent of the instructor) *CH 135 fall semester, CH 136 spring semester*

CH 141-142 Chemical Principles I-II (4 crs. for each semester)

Theoretical inorganic chemistry will be studied with emphasis on mass-energy relationships in terms of structure and physical laws. Laboratory work emphasizes quantitative techniques. Three hours of lecture and four hours laboratory weekly. *CH 141 is prerequisite to CH 142. CH 141 only satisfies the GER in Physical and Biological Sciences. CH 141 fall semester, CH 142 spring semester*

CH 241 Inorganic Quantitative Analysis (3 crs.)

The classical and modern methods for the volumetric and gravimetric determination of elements and groups. Two hours of lecture and one four-hour laboratory period weekly. (Prerequisite: *CH 132 or CH 142*) *Spring semester*

CH 242 Intermediate Inorganic Chemistry (3 crs.)

The descriptive chemistry, as well as synthesis and reactions, of nontransitional elements and their compounds are studied systematically. Correlations of structure and properties are explained on the basis of modern theories. (Prerequisite: *CH 132 or CH 142*) *Fall semester*

CH 250 Instrumentation (3 crs.)

The physical chemistry basic to modern analytical instrumentation will be discussed as the basis for the study of instrumental analysis. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: *CH 132 or consent of the instructor*) *Offered once in three years, spring semester*

CH/PH 260 Microprocessors-Microcomputer Technology (4 crs.)

A study of the electrical families, components and processes used to build the components of microprocessors and microcomputers. An examination of timing cycles for different microprocessors with limitations on the digital devices used and the various means by which these components can be assembled in the construction of the microcomputer. Comparison of the various microcomputers available. (Prerequisite: *A college level course in PH or consent of the instructor*) *Offered alternate years, fall semester*

CH 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquia in chemistry allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (Prerequisite: *consent of the instructor*) *CH 286 fall semester, CH 287 spring semester*

CH 300 Organic Chemistry for the Life Sciences (4 crs.)

The fundamentals of organic chemistry--structure, synthesis and mechanism--with applications to biological systems. Designed for students in the life sciences, e.g. nursing, medical technology, physical therapy and nutrition. Not recommended for students intending to pursue graduate study in microbiology, physiology or medicine. This course is not open to chemistry majors. Three hours of lecture and one three-hour laboratory period weekly. (Prerequisite: *CH 132 or CH 126*) *Offered once in three years, fall semester*

*See pages 75-76 for general information regarding course offerings.

CH 338-339 Honors Tutorial (3 crs. each semester)

Special topics in chemistry. Open to All-College and Departmental Honors students. Three hourly meetings weekly. (*Prerequisite: consent of the department*) CH 338 fall semester, CH 339 spring semester

CH 343-344 Organic Chemistry I-II (4 crs. for each semester)

A survey of the chemistry of organic compounds organized in terms of structure, mechanism of organic reactions, and synthesis. CH 343 is a prerequisite to CH 344. Three hours of lecture and one four-hour laboratory period weekly. (The same course may be taken without laboratory under CH 341, 342) (*Prerequisite: CH 132 or CH 142*)

CH 350 Introduction to Laboratory Automation (2 crs.)

The use of microcomputers for data acquisition and analysis. A study of transistors, amplifiers, op. amps., differential amps, power supplies, regulators and filters as used in laboratory instruments. The interfacing of these instruments, especially using the IEEE-GPIB bus, to microcomputers to receive and analyze data will be covered. Projects will be assigned in which the student works in the laboratory gathering data directly on a computer. One hour of lecture and two hours of laboratory weekly. (*Prerequisite: CH 100 or a knowledge of basic programming*) Offered once in three years, spring semester

CH 381-382 Physical Chemistry I-II (4 crs. for each semester)

The laws governing the physical and chemical behavior of compounds. Three hours of lecture and one four-hour laboratory period weekly. (*Prerequisite: CH 132 or CH 142; MA 152*) CH 381 fall semester, CH 382 spring semester

CH 390 Research Problems in Chemistry (credits to be arranged)

Special projects for advanced students desiring individual instruction in the methods of chemical research. Hours arranged. (*Prerequisite: CH 344, CH 382 and consent of the department*) Either semester

CH 392 Laboratory Techniques (3 crs.)

Special techniques used in the research laboratory, such as glass-blowing, vacuum line technique, vacuum distillation, dry-box operations and advanced synthetic methods. Hours arranged. (*Prerequisite: CH 344, CH 382*) Fall semester

CH 440 Advanced Organic Chemistry (3 crs.)

Selected topics in advanced organic chemistry, such as physical organic chemistry, alicyclic and heterocyclic chemistry, natural products, and advanced synthetic methods. Hours arranged. (*Prerequisite: CH 344, CH 382 or consent of the instructor*) Offered once in three years, spring semester

CH 442 Qualitative Organic Analysis (3 crs.)

The reactions of organic compounds with emphasis on those of importance for classification and identification and the elucidation of structure by spectroscopic analysis. Laboratory work involves the identification of both simple compounds and mixtures. One hour of lecture and one six-hour laboratory period weekly. (*Prerequisite: CH 344, CH 382 or consent of the instructor*) Spring semester

CH 444 Advanced Inorganic Chemistry (3 crs.)

The topics of group theory, stereochemistry, ligand field theory, molecular orbital theory, synthesis and kinetics of reactions as applied to transition metal elements will be treated in detail. CH 382 may be taken concurrently. Hours arranged. (*Prerequisite: CH 344, CH 382*) Spring semester

CH 450 Instrumental Analysis (3 crs.)

Theory and practical application of instrumental methods as applied to chemical analysis; including pH measurements, electro-deposition, potentiometry, crystallography, mass spectrometry and spectroscopy. CH 382 may be taken concurrently. Two hours of lecture and one four-hour laboratory period weekly. (*Prerequisite: CH 382*) Fall semester

CH 461 General Biochemistry I (4 crs.)

A survey of the chemical components of living matter and the major processes of cellular metabolism. Three hours of lecture and one three hour laboratory period weekly. (*Prerequisite: CH 344 or consent of the instructor*) Fall semester

CH 462 General Biochemistry II (3 crs.)

A survey of the chemical components of living matter and the major processes of cellular metabolism. Three hours of lecture weekly. The laboratory portion may be taken independent of the lecture under CH 466 Advanced Biochemistry Laboratory. (*Prerequisite: CH 461*) Spring semester

CH 466 Advanced Biochemistry Laboratory (2 crs.)

A study of special laboratory techniques used in biochemical research, such as chromatography, enzymology, radiochemical techniques, electrophoresis, and metabolic pathways. An individual project will complete the laboratory. One hour of laboratory discussion and three hours of laboratory weekly. (*Prerequisite: CH 461*) Spring semester

CH 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the Departmental Honors Committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Departmental Honors Committee. Either semester

CH 498 Internship in Chemical Sciences (3-15 crs.)

Laboratory experience in industrial or government laboratories, regulating agencies or academic laboratories at other institutions. (*Prerequisite: consent of the department; formal application required*) Either semester

CH 499 Directed Study in Chemistry (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department, formal application required*) Either semester

School of Arts and Sciences

Other Approved Courses:

CH 126 Introductory Chemistry for the Life Sciences II
 CH 210 Chemistry and Society
 CH 252 Recent Developments in Inorganic Chemistry
 CH 270 Introduction to Toxicology
 CH 280 Physical Chemistry for the Life Sciences
 CH 290 Environmental Chemistry
 CH 372 Marine Chemistry
 CH 389 Introduction to the Chemical Literature

CH 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

CH 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalogue.

CH 510 Chemical Instrumentation (3 crs.)

Three major areas of chemical instrumentation will be covered. Spectroscopy included infrared, ultraviolet and visible, atomic absorption, nuclear magnetic resonance and mass spectrometry. Electrochemistry covers pH, voltaic cells, and polarography. Chromatography includes paper, high pressure and electrophoresis. (*Prerequisite: consent of the instructor*)

CH 512 Microcomputers as Laboratory Instruments (4 crs.)

An introduction to the use of microcomputers in the laboratory in the physical sciences. This course is designed for practicing science teachers with no background in computer science. Topics to be considered will include the following: survey of microcomputer electronics; the organization of microcomputers; survey of available microcomputers, microcomputer printers and disc drives; available microcomputer languages; microcomputer operating systems; available microcomputer laboratory software in the physical sciences; laboratory data acquisition; microcomputer interfacing; and the use of simple microcomputer interfaces in the science laboratory. (*Prerequisite: Science teaching experience and a one-year introductory course in a physical science or consent of the instructor*)

CH/PH 525 Problem Solving in Chemistry and Physics (3 crs.)

Skills needed in the solving of problems in chemistry and physics will be developed. Emphasis will be on the application of mathematics to problem solving. Topics will be chosen from the sciences to illustrate the application of algebra, geometry, linear algebra and calculus to physics and chemistry. Methods of treating data obtained in the laboratory will be developed. (*Prerequisites: High School/Middle School Teacher of Mathematics or Science*)

CH 530 Computer Assisted Instruction Design in the Physical Sciences (4 crs.)

The design and implementation of CAI software in the physical sciences. The use of microcomputers to design, write, test, modify and debug a software package involving interactive microcomputer graphics. CAI software produced will be tested in science classes. (*May be taken for credit more than once up to a maximum of 16 credits.*)

CH 550 Chemistry and the Environment (3 crs.)

A study of the chemicals in the environment responsible for air, water, and soil pollution. Emphasis will be on simple techniques that can be used to detect these various types of chemicals. Laboratory work will include field trips to collect samples and analysis of samples.

CH 561 Recombinant DNA Technology (3 crs.)

An introduction to the structure of DNA and to the basic principles of gene manipulation, recombinant DNA technology and genetic engineering, including medical and industrial applications. (*Prerequisite: CH 343-344, BI 200, or consent of the instructor*)

CH 562 Enzymology (3 crs.)

An introduction to the basic principles of enzymology. Topics to be covered will include the structure of enzymes, experimental techniques for purification and structure determination, enzyme kinetics, enzyme mechanism and the regulation of enzymatic reactions. (*Prerequisite: CH 343-344*)

CH 582 Biochemistry Topics (3 crs.)

An in-depth examination of one area in biochemistry. Included will be a discussion of: laboratory techniques used in separation and purification, chemical structures and the interactions and functions of the biomolecules appropriate to the area of study. A critique of original literature will also be included. (*Prerequisite: CH 462 or consent of the instructor*)

CH 585 Atomic and Molecular Structure (3 crs.)

A modern approach to atomic and molecular structure will be developed and applied to selected cases from inorganic and organic chemistry. Topics to be covered will include the following: atomic structure, the molecular orbital approach to molecular structure, antibonding orbitals, introductory ligand field theory, geometrical and optical isomerism, conformational analysis, correlation of structure and reactivity, and the conservation of orbital symmetry. (*Prerequisite: consent of the instructor*)

CH 591 Advanced Organic Chemistry I, Structure (3 crs.)

Instrumental techniques of organic structure determination such as infra-red, ultraviolet and proton magnetic resonance spectroscopy and methods of separation and identification. Classic examples of modern structure proofs will be considered in detail. Students will conduct a literature search on the structure of an organic molecule and present a short seminar on this structure proof. Practical experience with IR, UV, NMR and gas chromatography of the structure of an unknown organic molecule. (*Prerequisite: CH 344*)

CH 592 Advanced Organic Chemistry II, Mechanism and Synthesis (3 crs.)

A one-semester course in advanced organic chemistry designed for participants who have some background in elementary organic chemistry. Topics to be considered will include recent developments in the mechanism of organic reactions and organic synthesis through retro-synthetic analysis. Special topics may include valence tautomerism, biogenetic synthesis, photochemistry, cycloaddition reactions and the Woodward-Hoffman rules for the conservation of orbital symmetry. (*Prerequisite: CH 344 and 591, or consent of the instructor*)

CH 594 Special Topics in Inorganic Chemistry

Major topics of solid state chemistry, theories of bonding (Ligand and molecular orbital), symmetry and group theory, atomic and molecular structure will be discussed. Additionally, topics in environmental chemistry, bioinorganic chemistry and medicine, color and magnetism and selected industrial chemical processes will be included in this course. (*Prerequisite: consent of the instructor*)

CH 597 Advanced Physical Chemistry I, Chemical Thermodynamics and Statistical Thermodynamics (3 crs.)

The zeroeth, first and second laws of thermodynamics, entropy and free energy functions, probability and the thermodynamic function from a statistical consideration, the participation function. (*Prerequisite: CH 382*)

CH 598 Advanced Physical Chemistry II, Atomic & Molecular Structure and Kinetics (3 crs.)

An introduction to quantum chemistry, rotational and vibrational levels, first, second and third order reactions, the Arrhenius Equation and energy of activation, consecutive reactions, collision and transition state theories. (*Prerequisite: CH 382*)



Department of Earth Sciences and Geography

Faculty

Chairperson:	Professor Jacek Sulanowski
Professors:	Robert Boutilier, Richard Enright, Ira Furlong, Glenn Miller, Reed Stewart
Associate Professor:	Vernon Domingo
Assistant Professors:	Marilyn Furlong, Madhu Rao
Instructor:	Sandra Clark

The Department of Earth Sciences and Geography offers undergraduate majors in earth sciences and geography. Majors in earth sciences may elect a concentration in geology. Majors in geography may elect a concentration in environmental geography. In addition, programs in chemistry-geology, oceanography, and urban affairs and planning are available. See the *Multidisciplinary and Pre-Professional Programs* section of this catalog.

The department works actively with state and regional agencies on socio-economic and environmental problems. Research on alternate energy sources, coastal storm impacts, regional economic developments, transportation planning, coal potential in southeastern Massachusetts, determination of radon pollution in eastern Massachusetts, and the impact of PCB's in New Bedford harbor are some of the recent projects.

Programs leading to the degree of Master of Arts in Teaching with a concentration in earth sciences or geography are offered by the department.

Modern equipment enables the department to offer investigation oriented laboratory experience. This equipment includes: (1) an X-ray Diffractometer with powder cameras; (2) thin section equipment; (3) polarizing and stereoscopic microscopes; (4) atomic absorption spectro-photometer; (5) seismic refraction unit; (6) surveying equipment; (7) a proton procession magnetometer; (8) earth resistivity unit; (9) Frantz Isodynamic Separator; (10) coastal research vessel; (11) a digitizer/planimeter and an 8-pen plotter; (12) various computer terminals; and (13) a portable gamma-ray spectrometer.

In addition, the department has a well-equipped cartographic laboratory and a computer laboratory, a climatological station with solar radiation recording instrumentation, a solar greenhouse classroom at the Burnell Campus School, an astronomy observatory, and a wet geochemistry laboratory. Finally, this department has access to a scanning electron microscope through the Southeastern Massachusetts Consortium. The department has an active earth sciences and geography club a chapter of Gamma Theta Upsilon, the international geographic honor society and a Chapter of Sigma Gamma Epsilon, the geology honor society.

Earth Sciences and Geography

Undergraduate Programs

Geography

Bachelor of Arts/ Bachelor of Science

The geography major is designed to provide the student with an understanding and appreciation of the physical and cultural attributes of the world in which he lives.

Opportunities for graduates include careers as geographers or cartographers in private industry, in many federal, state and local agencies, in urban and regional planning, in marketing and business offices, in governmental or private environmental offices, and as secondary school teachers. Courses leading to specialization in the following areas are available:

1. Urban and Regional Planning*
2. Environmental and Resources Management*
3. Business*
4. Regional Studies
5. Education

*Internships are available within these areas.

Geography Major

- I. All of the following:
GE 100 Physical Geography
GS 110 Human Geography
GE 204 Climatology
GE 216 Cartography
GS 362 Economic Geography
GS 490 Seminar in Geography
GS 353 Urban Geography
or
GS 473 Political Geography

Three additional physical geography or earth sciences courses or two physical geography or earth sciences courses plus either a physical geography or human geography course (urban geography strongly recommended).

- II. One of the following:
GE 217 Air Photo Interpretation--Remote Sensing
GS 363 Locational Analysis
GE 419 Geographic Information Systems

- III. One regional geography course (other than GS 160 or 170)

ID 260 Quantitative Methods in Earth Sciences
and Geography

plus two semesters of approved mathematics courses selected with adviser's approval (MA 141 and MA 142 preferred)

Not more than one "D" for a semester course in the major shall be accepted to fulfill the requirements for this program.

School of Arts and Sciences

Environmental Concentration

The concentration focuses on the integration of human activities within the physical environment and includes planning, management, environmental impact analysis and problem solving. The concentration may lead to work in various levels of government, with environmental organizations, in private industry, or to graduate study.

Core courses for the major:

GE 100 Physical Geography
GS 110 Human Geography
GE 204 Climatology
GE 216 Cartography
GS 300-400 A Regional Geography Course
GS 353 Urban Geography
or
GS 473 Political Geography
GS 362 Economic Geography
GS 490 Seminar in Geography

Courses to complete the concentration:

GE 307 Management and Preservation of Natural Environment
GE 361 Geography of Environmental Problems

Two of the following:

GE 203 Meteorology
GE 311 Energy and the Environment
GE 312 Solar Energy
ES 100 Physical Geology
ES 194 Environmental Geology
ES 240 Hydrology
ES 284 Geomorphology

GE 498 Internship in Geography or Planning,
with approval

Department elective, with approval

Plus:

CH 131-132 General Chemistry or one year of
biology, with approval
ID 260 Quantitative Methods in Earth Science and
Geography
MA 141 Elements of Calculus I
MA 142 Elements of Calculus II

No more than one "D" for a semester course in the department shall be accepted to fulfill the requirements for this concentration.

Double Major with Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in earth sciences or geography and elementary education, early childhood education or special education for certification purposes. Please contact the Department of Earth Sciences and Geography and the appropriate education department for further information.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific teacher certification and program requirements.

Geography Minor

GE 100 Physical Geography
GS 110 Human Geography

Four additional Geography courses recommended by the department. Two courses must be at the 200 level or higher and must be from at least two of the following areas:

- a) a systematic course
- b) a topical course
- c) a techniques course

Earth Sciences and Geography

Earth Sciences

The major in earth sciences is a broad based program that provides the student with an understanding and appreciation of the physical aspects of the earth and universe. Career opportunities for graduates exist in government service, industry, conservation and park management, and environmental studies relating to environmental impact statements as well as teaching in the secondary schools.

Earth Sciences Major

ES 100 Physical Geology
ES 101 Historical Geology
ES 284 Geomorphology
ES 301 Solar System Astronomy
or
ES 302 Stellar and Galactic Astronomy
GE 203 Meteorology
ES 306 Physical Oceanography
ES 372 Mineralogy
ES 463 Petrology
ES 496 Seminar in Geology

A minimum of three additional earth science courses selected with the adviser's approval and

MA 141-142 Elements of Calculus I-II

or

MA 151-152 Calculus I-II

CH 131-132 General Chemistry I-II

or

CH 141-142 Chemical Principles I-II

Two semesters of physics courses or two semesters of biology courses selected with adviser's approval.

Not more than one "D" for a semester course in the major shall be accepted to fulfill the requirements for this program.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific teacher certification and program requirements.

Earth Sciences Minor

ES 100 Physical Geology
ES 101 Historical Geology
Four additional earth sciences courses as recommended by the department

Geology Concentration

The concentration in geology provides students with an understanding of the physical aspects of the earth and the processes which act upon it. Students are prepared for government service, for environmental work relating to impact studies, and for work in such fields as mining, petroleum geology, or hydrology.

ES 100 Physical Geology
ES 101 Historical Geology
ES 283 Structural Geology
ES 284 Geomorphology
ES 372 Mineralogy
ES 463 Petrology
ES 475 Paleontology
ES 496 Seminar in Geology

Four additional earth science courses selected with the adviser's approval.

Plus:

MA 141-142 Elements of Calculus I-II

or

MA 151-152 Calculus I-II

CH 131-132 General Chemistry I-II

or

CH 141-142 Chemical Principles I-II

Physics or Biology:

PH 181-182 Elements of Physics I-II

or

PH 243-244 General Physics I-II

or

two semesters of biology courses selected with the adviser's approval

Not more than one "D" for a semester course in the major shall be accepted to fulfill the requirements for this program.

School of Arts and Sciences

Chemistry-Geology Major

A major in chemistry-geology is offered jointly with the Department of Chemical Sciences. See the catalog section *Multidisciplinary and Pre-Professional Programs* for details.

Geo-Physics Minor

A minor is jointly offered with the Department of Physics. For further information, contact the department chairpersons.

Double Major with Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in earth sciences or geography and elementary education, early childhood education or special education for certification purposes. Please contact the Department of Earth Sciences and Geography and the appropriate education department for further information.

Graduate Programs

Master of Arts in Teaching

The department offers a program leading to the degree of Master of Arts in Teaching with concentrations in earth sciences and geography. All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. Graduate students enrolled in the MAT program are required to have, or acquire outside of the degree program, a background of introductory college level courses in natural science and mathematics, to be determined by the department. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult MAT degree requirements in the *Graduate School* section of this catalog), and a minimum of 18 appropriate graduate credits in the academic concentration (approved by the program adviser on the basis of the background, interests, and needs of the student).

Liberal arts graduates seeking high school teaching certification through the M.A.T. program should consult the Department of Secondary Education and Professional Programs section of this catalog for detailed information about requirements.

The departmental offerings listed below include the following courses which may not be taken for graduate credit:

All courses in the 100 level

ES 201 Topics in Earth Science for
Elementary School Teachers

ES 499 Directed Study in Earth Science

GE 499 Directed Study in Geography

GS 210 Geography of War and Peace

Course Offerings*

Earth Sciences

ES 100 Physical Geology (3 crs.)

This is an introduction to the processes that formed and continue to shape the earth. Lecture topics include continental drift, rock and mineral forming processes, and the effects of agents of erosion such as glaciers, streams and waves. The laboratories develop skill in rock identification and map interpretation. Two hours of lecture and one two-hour laboratory period weekly. Satisfies the GER in physical and biological sciences. *Either semester*

ES 101 Historical Geology (3 crs.)

The origin and evolution of the earth and the life upon it. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: ES 100) *Spring semester*

ES 102 History of the Earth (3 crs.)

Theories concerning the origin and evolution of the earth, the atmosphere, the oceans, the continents, and life are discussed. Satisfies the GER in physical and biological sciences (non-lab course). *Either semester*

ES 194 Environmental Geology (3 crs.)

This course introduces students to the application of geologic principles in recognizing and controlling the effects of environmental problems such as earthquakes, volcanoes, floods, beach erosion, hazardous waste disposal and ground water quality. Satisfies the GER in physical and biological sciences (non-lab course). *Either semester*

ES 201 Topics in Earth Science for Elementary School Teachers (3 crs.)

An introduction to rocks, minerals, fossils, and the processes that mold the earth's surface such as running water, glaciers, winds, and waves. Emphasis will be on investigations that can be conducted in the classroom or in the immediate vicinity of a school, with topics selected from, but not restricted to, nationally developed science curricula. Two hours lecture and one two-hour laboratory period weekly. *Offered alternate years, fall semester*

ES 240 Hydrology (3 crs.)

Relations of surface to groundwater. Geologic controls of flow in ideal mathematical models and imperfect natural settings. Water supplies as renewable resource. Two hours lecture and one two-hour laboratory period weekly. (Prerequisite: consent of the instructor) *Fall semester*

ES 283 Structural Geology (3 crs.)

Analysis and origin of rock structures. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: ES 100, 101) *Spring semester*

ES 284 Geomorphology (3 crs.)

Relationships between gradational and tectonic forces and the resulting surface configuration of the earth. Two hours of lecture and one three-hour laboratory period weekly. (Prerequisite: ES 100 or consent of the instructor) *Fall semester*

ES 290 Dinosaur Paleobiology (3 crs.)

The most recent hypotheses concerning the paleogeography, functional morphology and paleoecology of the dinosaurs are considered. Various causes advanced to account for their extinction 65 million years ago are critically appraised. (Prerequisites: consent of the instructor)

ES 301 Solar System Astronomy (3 crs.)

Topics include: the sun, planets, satellites, comets, asteroids, astronomical instruments, time keeping and celestial coordinates, and the early history of astronomy. Use of the BSC observatory and instruments and a trip to a planetarium are required. (Prerequisite: MA 100 or the equivalent) *Spring semester*

ES 302 Stellar and Galactic Astronomy (3 crs.)

Topics include: stars and stellar evolution, nebulae and clusters, dwarfs, neutron stars and black holes, galaxies and the expanding universe. The history of astronomy since 1900 (which is the modern era) will be a theme throughout. Telescopic observations at the BSC observatory and a planetarium trip are required. (Prerequisite: MA 100 or the equivalent) *Spring semester*

ES 303 Practical Astronomy (3 crs.)

Each class will include a laboratory session in astronomy. Exercises include: setting up a theodolite for astronomical observations; laying out an astronomical north-south line; determining latitude by a noon sight; determining latitude and longitude by a single, timed observation; determining the periods of Jupiter's satellites; eccentricity of the Moon's orbit from Lunar photography measurements; silvering an astronomical telescope mirror; determination of the lengths of the sidereal and synodic months; distance to a quasar (using a Sky.Pub.Co.exercise); solutions of Kepler's equation by calculator; use of the Astronomical Almanac; use of the Bridgewater State College telescope. Occasional night sessions will be required. (Prerequisite: MA 100 or consent of the instructor) *Fall semester*

ES 305 Biological Oceanography (3 crs.)

Survey of marine life forms and of the chemistry of seawater. (Prerequisite: BI 100, BI 102, ES 306, or consent of the instructor) *Fall semester*

ES 306 Physical Oceanography (3 crs.)

Ocean water temperature, circulation, salinity, instruments and methods of investigation. (Prerequisite: MA 151 and 152, or MA 141 and 142, or consent of the instructor) *Spring semester*

ES 310 Geophysics (3 crs.)

A study of major earth forces, including discussions of the interior of the earth, heat distribution, convection and continental drift. (Prerequisite: consent of the instructor) *Offered alternate years, fall semester*

*See pages 75-76 for general information regarding course offerings.

School of Arts and Sciences

ES 311 Geochemistry (3 crs.)

Geological and chemical processes controlling the abundance and distribution of the elements at or near the earth's surface. (Prerequisite: consent of the instructor) Spring semester

ES 315 Computer Applications in Earth Science (3 crs.)

After a brief introduction to microcomputers, the major portion of the course is an exposure to a variety of programs of use in the earth sciences dealing with geophysics, hydrology, structural geology, mineralogy, petrology, optical mineralogy, orientation of structural features, analysis of sediments, paleocurrent analysis, geostatistics, use of plotter, mapping, etc. (Prerequisites: ES 100, ES 101, or consent of the instructor)

ES 372 Mineralogy (4 crs.)

Geometrical and X-ray crystallography followed by the determinative mineralogy of ore and rock-forming minerals. Two hours of lecture and two two-hour laboratory periods weekly. (Prerequisite: ES 100 and CH 131) Fall semester

ES 373 Optical Mineralogy (3 crs.)

Principles of optical crystallography. Measurement of optical constants with the polarizing microscope. One hour of lecture and two two-hour laboratory periods weekly. (Prerequisite: ES 372) Offered alternate years, fall semester

ES 374 Optical Petrology (3 crs.)

Systematic study of rocks and rock-forming minerals with emphasis upon the use of the polarizing microscope, interpretation of mineral assemblages, texture and structures, problems of petrogenesis. One hour of lecture and two two-hour laboratory periods weekly. (Prerequisite: ES 373) Offered alternate years, spring semester

ES 375 X-ray Analysis (3 crs.)

Principles and methods of X-ray diffraction analysis. Theory and practice of preferred orientation chemical analysis by diffraction and fluorescence. (Prerequisite: consent of the instructor) Offered once in three years

ES 463 Petrology (3 crs.)

Megascopic and microscopic classification of rocks and an introduction to petrogenesis. One hour of lecture and two two-hour laboratory periods weekly. (Prerequisite: ES 372) Spring semester

ES 464 Economic Geology I (3 crs.)

Geochemical and physical processes that produce economic mineral deposits. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: ES 100) Offered alternate years, fall semester

ES 465 Economic Geology II (3 crs.)

Study of selected major metallic and non-metallic deposits, energy sources and hydrologic reserves. Methods of extraction and the resulting environmental impact. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: ES 100) Offered alternate years, fall semester

ES 475 Paleontology (3 crs.)

A survey of the fossil record stressing the most important invertebrate phyla and their environmental relationships. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: ES 100, 101 or consent of the instructor) Fall semester

ES 476 Sedimentology and Stratigraphy (3 crs.)

Introduction to modern concepts and principles in sedimentology, paleoecology, and correlation: lithostratigraphic and biostratigraphic classification and interpretation of depositional and organic environments. Two hours of lecture and one two-hour laboratory period weekly. (Prerequisite: ES 100, 101 or consent of the instructor) Spring semester

ES 490 Field Methods in Geology (3 crs.)

Collection, processing and interpretation of field data developed by geologic mapping. Presentation of geologic reports involving maps, cross-sections and sample data. One hour of lecture and two two-hour laboratory periods weekly. (Prerequisite: ES 100, 101 or consent of the instructor) Spring semester

ES 496 Seminar in Geology (1 cr. each semester)

This course focuses on the development of thought concerning current global models and/or continuing controversies in geology. One credit will be earned per semester for a total of 2 credits to be awarded at the end of the second semester. (Prerequisite: Senior standing in geology, earth science or geochemistry)

ES 498 Field Experiences in Earth Science (3-15 crs.)

Intended to provide an opportunity for senior earth science majors to gain practical experience in the field. Placements will be made in appropriate local, state and federal agencies as well as with private corporations. (Prerequisite: consent of the department; formal application required) Either semester

ES 499 Directed Study in Earth Science (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: consent of the department; formal application required) Either semester

Other Approved Courses:

ES 130 Extraterrestrial Life
ES 220 Ceramic Materials
ES 230 Engineering Geology
ES 300 Excursions in Geology
ES 413 Survey of Physical and Historical Geology
ES 462 Geology of North America
ES 466 Glacial Geology
ES 477 Micropaleontology
ES 497 Research in Earth Science

ES 501 Observational Astronomy (3 crs.)

The class will be taught evenings over one academic year. It will begin in September with four 8:00-11:00 p.m. sessions consisting of classroom work and labs at the college observatory. The students will be introduced to setting up theodolites and telescope and the operation of the observatory. Classes will then meet monthly from 8-12 p.m. for the rest of the academic year

with the students engaging in a series of extensive observations which would, for example, involve determining the periods of Jupiter's satellites, the eccentricity of the moon's orbit, and determining the lengths of sidereal and synodic months. Students will make photographic records of observations for use in their future classes. (*Prerequisites: ES 301 Solar System Astronomy*)

ES 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

ES 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

ES 504 Observational Meteorology (3 crs.)

This course, which will meet five Saturdays--two in the fall, one in the winter, and two in the spring--from 9 a.m.- 5 p.m., will be combination of classroom and field experience. The students will observe and interpret local weather. Emphasis will be on single station forecasting techniques, micro-scale field studies, and analysis and interpretation of regional weather maps. The students will be introduced to and use local sources of real-time weather data, from local airfields, and commercial sources. Field trips will be taken to the Taunton NEXRAD doppler RADAR, and the state cranberry research station.

ES 506 Coastal Geology and Oceanography (3 crs.)

This course will be conducted entirely in the field, meeting on two Saturdays in the fall, one Saturday in January, and two Saturdays in the spring from 9 a.m. - 5 p.m. Each meeting will involve the student in a series of exercises which will require sampling, measuring, observing and classifying fauna as well as sediments. A number of environments will be studied and will include sandy beaches, rocky beaches, salt marshes, estuaries, and lakes. Students will also study tidal cycles, make salinity and temperature measurements and determine direction of sediment transport. The environments to be studied will include Duxbury Beach, New Bedford harbor and Cape Cod Bay. The duration of the course, spread over the entire academic year, will enable observation of seasonal changes in environmental parameters. Students will develop slide and video records of the sites for use in their classes as well as sediment and faunal sample collections where appropriate. (*Prerequisites: ES 306 Physical Oceanography*)

ES 550 Modern Developments in Earth Science (3 crs.)

An introduction to recent developments in the areas of continental drift, environmental geology, regional geology, energy resources and paleontology. Three (3) required Saturday field trips. (*Prerequisite: Science teaching experience at the pre-baccalaureate level and consent of the instructor*)

ES 590 Field Studies in Geology (3 crs.)

The course will meet for 5 all-day sessions and will be offered in either the spring or fall on Saturdays or as a one-week intensive course in the summer. The teachers will study classic geologic localities in southeastern Massachusetts and Rhode Island. They

will map and sample bedrock localities in the Blue Hills, Nantasket, the Boston Basin, and Newport, RI, in addition to one glacial geology field trip to Cape Cod. The participants will prepare labeled collections for the localities, slide and video presentations will be developed for each locality. Safe access to groups of students will be a primary consideration in the selection of appropriate localities for study. (*Prerequisites: ES 463 Petrology and ES 283 Structural Geology*)

School of Arts and Sciences

Physical Geography

GE 100 Physical Geography (3 crs.)

This is an introduction to physical geography phenomena (landforms, climate, oceans, soils) in which human-land relationships are central. The focus is on understanding the processes at work in the environment and on their interrelationships. Two hours of lecture and two one hour laboratory periods weekly. Satisfies the GER in physical and biological sciences. *Either semester*

GE 120 The Physical World (3 crs.)

This course studies the formation and distribution of landforms, climates, soils and vegetation. Emphasis is placed on the interrelationships among these components of the environment and their significance to life on earth. Satisfies the GER in physical and biological sciences (non-lab course). *Either semester*

GE 196 Environmental Geography (3 crs.)

The spatial aspects of the interaction between humans and their physical environment are examined through the analysis of selected problems from resource capacity to pollution. The perceptions of environmental hazards of human settlements are examined to illuminate environmental decision-making. Satisfies the GER in physical and biological sciences (non-lab course). *Either semester*

GE 203 Meteorology (3 crs.)

Study of the basic atmospheric processes that result in weather, regional weather systems. Basic instrumentation and practice in observing, data presentation, and interpretation of weather maps. Two hours of lecture and one two-hour laboratory period weekly. *(Prerequisite: GE 100, GE 120 and consent of the instructor) Fall semester*

GE 204 Climatology (3 crs.)

Study of the elements and controls of climate emphasizing their effect on man and the environment, and man's response to and modification of climate. The world distribution of climatic regions. Instrumentation and practice in observing, data presentation and analysis. *(Prerequisite: GE 100 or GE 120 or consent of the instructor) Spring semester*

GE 216 Cartography (3 crs.)

Theory and practice in the design and drafting of maps, graphs and charts for the graphic presentation of geographical and statistical information. One hour of lecture and four one-hour laboratory periods weekly. Additional laboratory time may be required. *(Prerequisite: GE 100 or GE 120 or ES 100 or consent of the instructor) Spring semester*

GE 217 Air Photo Interpretation -- Remote Sensing (3 crs.)

Theory and practice in extracting information about the earth's physical and cultural features from aerial photographs. Acquaint students with the detection, identification, and analysis of the earth's features through remote sensing. The application of computerized digital image processing to satellite environmental data. *(Prerequisite: GE 100 or GE 120 or ES 100) Fall semester*

GE 307 Management and Preservation of Natural Environment (3 crs.)

This course is devoted to a detailed examination of the occurrence, exploitation and conservation of natural resources, including minerals, soils, water, forests, grasslands, fisheries, wildlife, recreation areas and scenery. Emphasis is placed on conservation in the United States. *(Prerequisite: Junior standing and consent of the instructor) Offered alternate years, fall semester*

GE 361 Geography of Environmental Problems (3 crs.)

Environmental problems are considered in this course from the geographer's point of view—problems such as population densities and distribution, balanced land use and its philosophic, aesthetic, and scientific basis, the circulation of goods and people, and a comparison of levels of development. *(Prerequisite: ES 100, GE 100 or GE 120) Offered alternate years, spring semester*

GE 418 Computer Cartography (3 crs.)

This course is concerned with the theory and application of computer processing as related to cartographic design and production. It will emphasize the use of large mainframe computers and peripheral devices (i.e. line printer, pen plotter, digitizer, and graphics terminal) in the production of maps and other graphic output. No knowledge of computer programming is required for the course. *(Prerequisite: GE 216) Offered alternate years, fall semester*

GE 419 Geographic Information Systems (3 crs.)

This course explores the use of computers in handling geographic information. Students will learn the conceptual modeling methods and principles necessary for the design and assessment of geographic information systems. Applications of several geoprocessing tools to accomplish the horizontal and vertical integration of spatial data are considered. Vector, raster and relational data structures are examined. No knowledge of computer programming is required for the course. Two hours of lecture and three one-hour laboratory periods weekly. Additional laboratory and field time may be required. *(Prerequisites: At least junior standing (open to all majors), or consent of the instructor) Spring semester*

GE 474 Quantitative Geography (2 crs.)

The use of statistical techniques, and computer and model building methodology to analyze various spatial phenomena. *(Prerequisite: MA 110 or consent of the instructor)*

GE 498 Internship in Geography or Planning (3-6 crs.)

Student internship in a local planning department or agency. The purpose of this internship is to provide a student with experience in various aspects of his planning interests. *(Prerequisite: consent of the department; formal application required) Either semester*

GE 499 Directed Study in Geography (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. *(Prerequisite: consent of the department; formal application required) Either semester*

Earth Sciences and Geography

Other Approved Courses:

GE 180 Outdoor-Indoor Investigations in Physical Geography
GE 311 Energy and the Environment
GE 312 Solar Energy
GE 354 Field Methods in Urban Geography
GE 410 Urban Land Use Mapping
GE 440 Field Research in Appalachia
GE 497 Research in Geography

GE 500 Planning and Urban Environment (3 crs.)
Philosophy and problems of urban and regional planning.

GE 502 Research (credit to be arranged)
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

GE 503 Directed Study (credit to be arranged)
Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

GE 520 Improving the Teaching of Earth Science, Geography, and Energy I (3 crs.)
This course will update and improve the background of teachers with respect to new developments in geography, earth sciences and energy education. (*Prerequisite: consent of the instructor*)

GE 521 Improving the Teaching of Earth Science, Geography, and Energy II (3 crs.)
This course is built around workshops, field trips, and related field guides and texts, all designed to aid teachers in the implementation of curriculum materials (*Prerequisite: GE 520 or consent of the instructor*)

GE 540 Introduction to Hazardous Waste Management (3 crs.)
Course is designed to provide graduate students with an understanding of the major issues surrounding the management of hazardous waste. Topics to be covered include: the generation of hazardous wastes and their characteristics as defined by the Resource Conservation and Recovery Act (RCRA), the problems of abandoned disposal sites, alternative hazardous waste disposal technologies, siting of a hazardous waste management facility, and federal and state laws covering hazardous waste management. (*Prerequisite: GE 100 or GE 120 or ES 100 or ES 194 or consent of the instructor*)

Geography as a Social Science

GS 110 Human Geography (3 crs.)
An inquiry into the theoretical and empirical approaches to the study of human spatial analysis is presented. The major topics covered include population, race, language, religion, politics, urbanization and economics. Satisfies the GER in Social Sciences. *Either semester*

GS 150 Geographic Approach to Social Science (3 crs.)
The interpretation of maps, globes and graphs as the basis for inferences about social phenomena and problems. This course has been developed in cooperation with the Department of Elementary and Early Childhood Education and is of special interest for future elementary school social studies teachers. Does not satisfy GER. *Offered alternate years, spring semester*

GS 160 Geography of Non-Western Cultures (3 crs.)
This course in human geography introduces the geographical study of the current cultural and social systems in the non-western world (in Africa, Asia and Latin America). Emphasis is placed on the diversity of cultural frameworks and their strategies for dealing with problems. Satisfies the GER in non-western civilization. *Fall semester*

GS 170 Regional Geography: The Developed World (3 crs.)
The study of regional geography of the developed world (including Anglo-America, Europe and the Soviet Union, Australia and Japan) investigates how humans have used the resources available to them to obtain a high standard of living in different physical and cultural milieux. This high standard of living is reflected in land use patterns that are similar in their broad outlines but different in detail. Satisfies the GER in social sciences. *Spring semester*

GS 353 Urban Geography (3 crs.)
The geographic aspects of the city including location, function, land use patterns, and interaction. Field work focuses on current problems facing urban life. (*Prerequisite: Any GS course or consent of the instructor*) *Fall semester*

GS 362 Economic Geography (3 crs.)
The geographical analysis of the distribution of economic activities such as production, exchange and consumption is presented in this course. Here we examine the principles underlying spatial variations in land-use and economic development at the local, national and international levels. (*Prerequisite: Any GS or EC course or consent of the instructor*) *Fall semester*

GS 363 Locational Analysis (3 crs.)
The spatial approach is utilized to analyze retail, industrial, and public utility location. Topics covered include demographic analysis, retail structure, location factors, and economic development. *Prerequisites: EC 101 or GS 362 or consent of the instructor*

GS 378 Geography of Anglo-America (3 crs.)
A description and analysis of the relationships between relevant physical and cultural features of regions in the United States and

School of Arts and Sciences

Canada. (Prerequisite: GE 100 or 120 or consent of the instructor) Fall semester

GS 380 Geography of Russia/C.I.S. (3 crs.)

The geography of environment, resources and population is studied in relation to history and the present economic and social system of the Russia/C.I.S. (Prerequisite: Any 100 level GE or GS course) Offered alternate years, fall semester

GS 382 Geography of Europe (3 crs.)

The character of the natural and cultural environments of the geographic regions of Europe. (Prerequisite: Any 100 level GE or GS course) Offered once in three years

GS 384 Geography of Asia (3 crs.)

The physical and cultural patterns of selected countries of Asia. (Prerequisite: Any 100 level GE or GS course) Offered once in three years

GS 386 Geography of Canada (3 crs.)

The geography of environment, resources and population is examined in relation to history, economic, and regional land patterns of Canada. (Prerequisite: GE 100 or GE 120 or consent of the instructor) Offered alternate years, spring semester

GS 388 Geography of Africa (3 crs.)

The physical and cultural features of the African continent with special reference to the emerged political and regional patterns. (Prerequisite: Any 100 level GE or GS course) Spring semester

GS 420 Principles of Urban and Regional Planning (3 crs.)

An introduction to the process of planning which deals with the interrelationships of resources, facilities, activities, and people over time and space. (Prerequisite: GS 353 or consent of the instructor) Offered alternate years, spring semester

GS 430 Geography of Transportation (3 crs.)

This course will provide a spatial understanding of the role of transportation and interaction. It will provide an analysis of the importance of location relative to economic activities, development of distribution systems, flow analysis, effectiveness of distributional systems and the impact of transport systems on economic development. (Prerequisite: Any GS course or consent of the instructor)

GS 473 Political Geography (3 crs.)

The course examines the variation of politically-organized areas and their relationships to each other. The focus is on the interaction of geographical factors (distance, location and distribution) and political process. Emphasis is on both state and non-state agents in the political arrangement of space. (Prerequisite: Any GS or PO course) Fall semester

GS 490 Seminar in Geography (3 crs.)

The historical development of methods and techniques used in geographic research. Preparation of a research paper on a problem selected from one of the subdivisions of geography. For senior geography majors.

GS/GE 498 Internship in Geography or Planning (3-6 crs.)

Student internship in a local planning department or agency. The purpose of this internship is to provide a student with experience in various aspects of his planning interests. (Prq: consent of the department; formal application required) Either semester

GS 499 Directed Study in Geography (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: consent of the department; formal application required) Either semester

Other Approved Courses:

GS 115 Map Skills for the Citizen

GS 200 Geography of the Bible

GS 210 Geography of War and Peace

GS 358 Geography of Latin America

GS 450 Geography of Agriculture and Food Production

GS 470 Historical Geography of New England

GS 550 Contemporary Issues in Geography (3 crs.)

Geographic issues from the classical period through the modern era will be examined with an emphasis on contemporary geographical problems and developments in both the western and the non-western world. The course explores paradigmatic shifts in the field of geography and their significance for present-day geographic thought and research.

GS 555 Field Methods in Geographic Inquiry (3 crs.)

The basis for this course is the contention that the principal training of the geographer should come from doing fieldwork. The skills of observing and recording of data are emphasized in real world settings where students are led to recognize spatial patterns, to develop hypothesis, and to evaluate their findings. The course involves numerous field trips within the local area as cultural and physical topics with an emphasis on the interaction between these realms.

GS 560 Seminar in Geographic Education (3 crs.)

This seminar discusses international perspectives on the essential nature of spatial analysis and its relation to primary, secondary, and tertiary education. The aims, content, and evaluation of geography programs are examined in order to develop a coherent framework for analyzing the practice of the field in these educational settings. The course also explores the intellectual ingredients essential for a geographer, and especially required of a geographer educator.

GS 565 GeoTechnology (3 crs.)

This course provides an understanding and exposure to selected fields of geotechnology including cartography, computer cartography, airphoto interpretation, remote sensing, geodesy, and geographic information systems (GIS). Learn to distinguish the principles behind the chosen fields and develop the ability to integrate them, for example, remote sensing and GIS. Apply and test mapping-related software on different computer platforms using wide variety of software programs with practical applications. (Additional laboratory and field time may be required).

GS 570 Planning and Economic Development (3 crs.)

An examination of the concepts and approaches to urban and regional planning and economic development, with an emphasis on design, land use, urban renewal, and zoning. The course explores the rationales and outcomes of public and private facility location. Local fieldtrips and attendance at public hearings will be required.

GS 575 Environmental Issues: Problems and Solutions (3 crs.)

The course will examine the earth as transformed by human action at the global, regional, and local scales. Detailed study of selected pressing issues will be pursued from historical, contemporary, and predictive viewpoints. Factors influencing possible resolutions of these issues will be closely examined.

GS 580 The Regional Method in Geographic Analysis (3 crs.)

This course examines the nature of regionalism as a heuristic device. The purposes and problems of regionalization are explored in a variety of contexts where human and physical phenomena interact. Regions are analyzed and changing social constructs essential for the spatial analysis so central to geographic inquiry. The course examines changing definitions of regionalism from the French compagne to the fluid functional regions of contemporary life.



Department of Economics

Faculty

Chairperson: Assistant Professor Anthony Cicerone

Professors: Margaret Landman, Ranjit Vohra

*Associate
Professor:* Stanley Antoniotti

Instructor: Daniel Lomba

Undergraduate Programs

Economics Major

The major in economics is a comprehensive program which enables students to become familiar with many aspects of the economy and provides them with training in economic analysis and problem-solving techniques. A strong background in economic theory will prepare students for entry into fields such as banking, finance, business, politics, and real estate.

Requirements:

EC 101 Principles of Microeconomics (3 crs.)
EC 102 Principles of Macroeconomics (3 crs.)
EC 201 Intermediate Microeconomic Theory and Policy (3 crs.)
EC 205 Intermediate Macroeconomic Theory and Policy (3 crs.)
EC 210 Quantitative Analysis (3 crs.)
plus five 300 level or higher economics courses (3 crs. each) for a total of 30 credit hours in economics.

Economics Minor

The minor in economics offers a basic program which enables students to become familiar with some aspects of the economy and provides them with training in economic analysis and problem-solving techniques.

Requirements:

EC 101 Principles of Microeconomics
EC 102 Principles of Macroeconomics
EC 210 Quantitative Analysis for Economics
EC 201 Intermediate Microeconomic Theory and Policy
EC 205 Intermediate Macroeconomic Theory and Policy

plus a minimum of two other economics courses at the 300 or 400 level. The two courses, MA 110 Elementary Statistics and MA 318 Quantitative Methods for Management, may be substituted for EC 210.

Graduate Programs

The Department of Economics does not offer a program at the master's degree level in Economics. Economics courses may be taken, with faculty adviser approval, in a program leading to the degree of Master of Arts in Teaching with a concentration in social sciences. Detailed information regarding this degree may be found in the *Graduate School* section of this catalog as well as under the Department of History.

The departmental offerings listed below include the following courses which may not be taken for graduate credit:

- EC 101 Principles of Microeconomics
- EC 102 Principles of Macroeconomics
- EC 499 Directed Study in Economics



School of Arts and Sciences

Course Offerings*

EC 101 Principles of Microeconomics (3 crs.)

This course focuses on the theory and application of utility and demand, production, cost and market analysis. Satisfies the GER in social sciences. *Either semester*

EC 102 Principles of Macroeconomics (3 crs.)

This course focuses on the theory and application of the following: national income analysis and determination, fiscal policy, monetary theory and policy, and the Federal Reserve system. Satisfies the GER in social sciences. *Either semester*

EC 201 Intermediate Microeconomic Theory and Policy (3 crs.)

The theory of consumer behavior and demand, production and cost, the firm and market organization are discussed with emphasis placed on practical applications. (*Prerequisite: EC 101-102 or consent of the instructor*) *Fall semester*

EC 205 Intermediate Macroeconomic Theory and Policy (3 crs.)

A number of macroeconomic models are developed in this course, including the Keynesian, monetarist, and rational expectations models. Economic theory is used to explore the nature and causes of business fluctuations and the desirability of various government policies. (*Prerequisite: EC 101-102 or consent of the instructor*) *Spring semester*

EC 210 Quantitative Analysis for Economics (3 crs.)

Quantitative analysis discusses the following subjects: data collection and presentation, measures of central tendency and dispersion, probability, sampling, hypothesis testing, regression and correlation analysis. (*Prerequisite: MA 141-142; EC 101-102; or consent of the instructor*)

EC 301 Industrial Organization (3 crs.)

This course provides an analysis of the structure, conduct, and performance of industries. Topics discussed include causes and measurement of market concentration, strategic behavior of firms, and the development of public policies, such as antitrust and regulation, that affect business. (*Prerequisite: EC 101-102 or consent of the instructor*)

EC 315 Money and Banking (3 crs.)

The roles and functions of money and the banking system are discussed. Various monetary theories and the influence of monetary policy on the state of the economy are examined. (*Prerequisite: EC 101-102 or consent of the instructor*) *Fall semester*

EC 320 Comparative Economic Systems (3 crs.)

The philosophical and structural foundations of capitalism and democratic socialism are studied. Emphasis is placed on a comparison of the American economy to the economies of other countries. *Fall semester*

EC 321 International Economics (3 crs.)

Pure trade theory and its application to solving policy problems are covered in this course. Topics studied include balance of trade, balance of payments and monetary systems. (*Prerequisite: EC 101-102 or consent of the instructor*)

EC/PO 340 Law and Economics (3 crs.)

This course examines the economic basis for legal decisions. Microeconomic theory is combined with an analysis of the law, with particular emphasis on case studies. Topics covered include the problems of defining property rights and the economics of tort, contract and criminal law. (*Prerequisites: PO 172 or PO 285 and EC 101*)

EC 350 Urban Economic Problems and Policies (3 crs.)

The economic aspects of selected urban problems such as housing, poverty, transportation, crime and the urban environment are analyzed. Public policies relating to these problems are discussed. (*Prerequisites: EC 101 and EC 102, or consent of the instructor*)

EC 375 Labor Economics (3 crs.)

This course analyzes the determination of wages and employment in the labor market. Applications of the theory include unemployment, discrimination, safety in the workplace, and unions. Effects of government policies, such as comparable worth, affirmative action, and health and safety regulations, are examined. (*Prerequisite: EC 101-102 or consent of the instructor*)

EC 400 History of Economic Thought (3 crs.)

An overview of the development of economic theory is presented in an historical context. The ideas of many important contributors to economic thought will be studied including those of Adam Smith, Karl Marx, and John Maynard Keynes. (*Prerequisite: EC 101-102*)

EC 410 Mathematical Economics I (3 crs.)

This course provides training in the use of calculus and other mathematical tools in comparative static analysis and the solving of optimization problems in economics. (*Prerequisite: MA 141-142, MA 120, EC 101-102 or consent of the instructor*)

EC 411 Mathematical Economics II (3 crs.)

This course is a continuation of Mathematical Economics I. Topics will include dynamic analysis using the tools of integral calculus, difference and differential equations, linear programming and game theory. (*Prerequisite: EC 410*)

EC 420 Econometrics I (3 crs.)

This course is an introduction to the methods of econometrics, including the two variable linear model, the generalized least squares estimator and autocorrelation. (*Prerequisite: MA 141-142, MA 120 or EC 410 and EC 411; EC 101-102 or consent of the instructor*)

*See pages 75-76 for general information regarding course offerings.

EC 421 Econometrics II (3 crs.)

This course is a continuation of Econometrics I. Topics discussed include stochastic regressors, instrumental variables, errors in variables, lagged variables and simultaneous equation methods. *(Prerequisite: EC 420)*

EC 499 Directed Study in Economics (1-3 crs.)

Juniors and seniors who have demonstrated critical and analytical abilities in their studies may pursue an independent project under a faculty member's supervision. This course may be taken twice for a maximum of six credits. *(Prerequisite: consent of the department; formal application required)* Either semester

EC 502 Research (credit to be arranged)

This course consists of original research undertaken by the graduate student in his field of interest under the sponsorship of a faculty adviser. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

EC 503 Directed Study (credit to be arranged)

This course is designed for the graduate student who desires to study selected topics in a specific field of interest under the direction of a faculty adviser. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

EC 510 Graduate Seminar in Domestic Economic Problems (3 crs.)

Individual research and group discussion are combined in this seminar on the problems of the American economy. *(Prerequisite: consent of the instructor)*

EC 520 Graduate Seminar in International Economic Problems (3 crs.)

Individual research and group discussion are combined in this seminar on the problems of international economic relations. *(Prerequisite: consent of the instructor)*

EC 531 Economics for Elementary Teachers (3 crs.)

This course focuses on the development of microeconomic and macroeconomic programs for elementary school students. Various materials and sources are introduced. *(Prerequisite: A bachelor's degree and some background in elementary education)*

EC 532 Economics for Secondary Teachers (3 crs.)

This course focuses on the development of microeconomic and macroeconomic programs for secondary school students. Various materials and sources are introduced. *(Prerequisite: A bachelor's degree and some background in education)*

Department of English

Faculty

<i>Chairperson:</i>	Professor Charles Angell
<i>Professors:</i>	Marcia Anderson, Barbara Apstein, Thomas Curley, Harold DeLisle, Arnold Girdharry, Grant Keener, Joseph Liggera, Charles Nickerson, Lois Poule, Judith Stanton, Paula Vadeboncoeur, Delija Valiukenas, Clifford Wood
<i>Associate Professors:</i>	Leslie Angell, Michael Boyd, Maureen Connelly, Evelyn Pezzulich, Jadwiga Smith, William Smith
<i>Assistant Professor:</i>	Michael Hurley
<i>Instructor:</i>	Karl Schnapp

graduate study. Bridgewater State College English majors have achieved success in a wide variety of occupations including teaching, banking, law, medicine, publishing, government service, public relations, technical writing, creative writing, advertising, and business administration.

The department also offers an honors program for students who wish to pursue independent study culminating in a thesis.

The Department of English participates in multidisciplinary minors such as American Studies, Canadian Studies, and Women's Studies. For specific information on these programs, consult the catalog section *Multidisciplinary and Pre-Professional Programs*.

Undergraduate Programs

Bachelor of Arts

The program of study for English majors aims to give students an acquaintance with the history and background of English and American literature, an understanding of great literary works, and the ability to analyze, interpret, and appreciate what they read. With a foundation in English and American literature and a grasp of literary principles and techniques of critical analysis, English majors have sufficient preparation to enter diverse careers or the preparation to pursue

English Major

Majors must achieve a grade of C or above in EN 101 Writing I and EN 102 Writing II.

The Department of English will permit its majors to use only one passing grade below C- to satisfy requirements in the English major. An additional grade below C- will require that majors take another English course.

The major must earn 36 credits in English which must include three semester hours in each of the following:

EN 203 Writing About Literature (must be taken early in the major)

EN 211 Literary Classics of Western Civilization to 1600

or

EN 221 Major British Writers to 1800

English literature before 1800;

English literature after 1800;

American literature;

a seminar (generally taken during the senior year).

No more than six hours of 200 level literature courses can be credited toward the major. Credit earned for EN 101 and EN 102 may not be applied to the major.

Writing Concentration

The writing concentration is designed to offer a student supervised writing throughout the college career.

Students may select courses which emphasize applied writing (technical and business writing), expressive or referential writing, or the teaching of writing. All students electing the writing concentration will be required to take EN 390 Theories of Writing.

Students will choose 12-15 credits from among the following (EN 390 must be included):

EN 200 Personal and Public Writing

EN 201 Technical Writing I

EN 202 Business Communication

EN 203 Writing About Literature

EN 230 Creative Writing

EN 280 Journalism

EN 301 Writing and the Teaching of Writing

EN 302 Technical Writing II

EN 389 Topics in Writing

EN 390 Theories of Writing

Double Major with Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in English and Elementary Education, Early Childhood Education or Special Education for certification purposes. Appropriate advising materials with suggested course sequences are available.

English Minor

Traditionally considered the province of liberal arts majors, the English minor also offers a suitable option for students majoring in such specialized technical and professional fields as computer science, social sciences, behavioral sciences, and management science. Eighteen credits in English are required with at least nine credits in courses above the 300 level.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific teacher certification and program requirements.

School of Arts and Sciences

Graduate Programs

Master of Arts

The Department of English offers a program leading to the degree of Master of Arts in English. An undergraduate major in English, with at least twenty-four hours of above average work in the discipline, is normally required for admission to this program. Students with deficient academic backgrounds are sometimes accepted into the program with the stipulation that these deficiencies be made up before work actually credited to the degree begins.

Upon acceptance into the program, the student will be assigned an adviser and given copies of the brochures entitled "Graduate Study in English" and "Recommended Readings for M.A. and M.A.T. Candidates." All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. Students must complete a minimum of 30 credits, including eight lecture or seminar courses (24 credits) distributed as follows: four of the eight must be at the 500 level, including two seminars; one of these four must be EN 500 Theory and Discipline and one must be in Shakespeare studies. Of the remaining six courses, whether on the 500, 400, or 300 level, one must be in British literature before 1800 and two must be in British literature after 1800, and one must be in American literature. Students may choose from the range of courses, with the assistance of an adviser, to round out the program. Courses may be taken in Canadian or Latin American literature, and courses in art, history, and philosophy should be permitted. A foreign language proficiency and a comprehensive examination are required for the M.A. in English. A thesis (6 credits) must also be completed for the M.A.

The departmental offerings listed below include the following courses which may not be taken for graduate credit:

All courses at the 100 and 200 levels
EN 499 Directed Study in English.

Master of Arts in Teaching

The Department of English offers a program leading to the degree of Master of Arts in Teaching with a concentration in English. Upon acceptance in the program, the student will be assigned an adviser and given copies of the brochures entitled "Graduate Study in English" and "Recommended Readings for M.A. and M.A.T. Candidates." All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalog); and a minimum of 21 appropriate graduate credits in English, distributed as follows: three courses at the 500 level including two seminars; one of the three courses must be EN 500 Theory and Discipline. The remaining four courses must be in studies in literature. A comprehensive examination is required for the M.A.T.

Liberal arts graduates seeking high school teaching certification through the M.A.T. program should consult the Department of Secondary Education and Professional Programs section of this catalog or detailed information about requirements.

The departmental offerings listed below include the following courses which may not be taken for graduate credit:

All courses in the 100 and 200 levels
EN 499 Directed Study in English.

Course Offerings*

Successful completion of EN 101, EN 102 (or their equivalent) is a prerequisite to all other English courses.

EN 101 Writing I (3 crs.)

By intensive practice in composing short expository essays, the writer explores various techniques for discovering, developing and organizing ideas. Special attention will be given to mastering essential skills appropriate to academic writing. Satisfies the GER in Writing.

EN 102 Writing II (3 crs.)

Continuing to develop essential skills, the writer learns and practices various techniques of argumentation. Special attention will be given to learning basic research skills and to integrating the ideas of others into one's own text. Emphasis is on longer and more substantive essays and a research paper. Satisfies the GER in Writing.

EN 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman Honors Colloquia in English allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (Prerequisite: consent of the instructor) EN 135 fall semester, EN 136 spring semester

EN/RE 170 Middle Eastern Islamic Literature (3 crs.)

This course studies the literature of Middle Eastern Islam in its cultural setting from the writing of the Qur'an. Prose, poetry and drama by such authors as Omar Khayyam, Rumi, Hafiz, Khalifah and Sa'di are analyzed to illuminate contemporary Islamic culture. Comparison is made with Jewish and Christian literatures. Satisfies the GER in Literature.

EN 200 Personal and Public Writing (3 crs.)

The course offers the opportunity to write in a variety of personal and public forms. The pre-writing, composing, and revising stages of the writing process are emphasized through frequent practice and instructor and peer criticism.

EN 201 Technical Writing I (3 crs.)

Emphasis on writing with practical applications, such as summaries, abstracts, outlines, proposals, interviews, progress reports, and a guided research paper. Subject matter is often drawn from the students' own disciplines.

EN 202 Business Communication (3 crs.)

The course develops competence in recognition and production of business summaries and abstracts, memoranda and letters, and reports. Concerns of style, tone, arrangement, format, and information levels are treated in the context of various explicit and implicit management structures.

*See pages 75-76 for general information regarding course offerings.

EN 203 Writing About Literature (3 crs.)

This course will help students develop the skills needed for writing papers in upper-level literature courses. By reading, discussing, and writing about works in various genres, students will learn what sorts of questions are likely to generate insight into a work of literature, how to develop and support such insights in a paper, how to distinguish a valid from an invalid interpretation, and how to use the specialized terminology associated with each of the major genres.

EN 211 Literary Classics of Western

Civilization to 1600 (3 crs.)

Major works of Western literature from ancient times through the renaissance are studied. The course encompasses diverse literary forms and themes through such works as the Bible, Homeric epic, Greek drama, *The Divine Comedy*, and a Shakespearean play. Satisfies the GER in Literature.

EN 212 Literary Classics of Western

Civilization Since 1600 (3 crs.)

Major works of Western literature from the renaissance to modern times will be studied. The course will encompass diverse literary forms and themes through such works as *Don Quixote*, *Candide*, *Madame Bovary* and a play by Ibsen. Satisfies the GER in Literature.

EN 214 The Classical Tradition (3 crs.)

Major Greek and Roman writers in modern English translation are studied. Included will be such figures as Homer, Sophocles, Plato, Euripides, Cicero, and Virgil. Satisfies the GER in Literature.

EN 221 Major British Writers to 1800 (3 crs.)

Representative works by major British writers from the Anglo-Saxon period through the eighteenth century are studied, including such figures as Chaucer, Shakespeare, Milton, Donne, Pope and Swift. Satisfies the GER in Literature.

EN 222 Major British Writers Since 1800 (3 crs.)

Representative works by major British writers of the nineteenth and twentieth centuries are studied, including such figures as Wordsworth, Keats, Tennyson, Dickens, Shaw, Yeats, Eliot, Woolf and Joyce. Satisfies the GER in Literature.

EN 230 Creative Writing (3 crs.)

Problems of invention, composition, form and style solved through frequent practice and criticism of professional and student models and anecdotal evidence of professional writers. May be offered in short fiction, poetry, or drama and repeated once for credit.

EN 231 Major American Writers to 1865 (3 crs.)

Representative works by major American writers from the seventeenth century through the Civil War are studied. Included are such figures as Franklin, Poe, Emerson, Hawthorne, Melville and Whitman. Satisfies the GER in Literature.

EN 232 Major American Writers Since 1865 (3 crs.)

Major American writers from the Civil War to the present are studied, including such figures as Twain, Dickinson, James, Frost, Hemingway and Faulkner. Satisfies the GER in Literature.

School of Arts and Sciences

EN 241 Shakespeare (3 crs.)

This general introduction to Shakespeare's plays is set against the background of his time, and includes a detailed study of representative tragedies, comedies, and histories. Satisfies the GER in Literature.

EN 251 Literary Themes (3 crs.)

Major literary texts are examined from the perspective of a common theme. In a given semester the course might concern itself with love, the family, madness, law, nature (as examples of particular themes) to illustrate how writers from diverse cultures and/or historical periods working with different genres shape imaginative responses to enduring themes. Satisfies the GER in Literature.

EN 252 Literary Types (3 crs.)

Major literary texts are examined from the perspective of one genre or type and focus in a given semester on the novel, drama, poetry, short story, and biography. Works from diverse cultures and/or historical periods will be used to illustrate how conventions of type or genre shape a writer's discourse. Satisfies the GER in Literature.

EN 261 Film Study: Introduction to the Art (3 crs.)

Major American and foreign films and directors from the silent era to the present are evaluated to develop critical awareness and esthetic appreciation of film as an art form. In addition, film viewing, readings in film theory, interpretation, and criticism are required. Does not satisfy literature GER.

EN 262 Film Study: Literature and Film (3 crs.)

Adaptations of literature into film will be evaluated to develop an understanding of the narrative demands of both genres. Viewing and reading works in both media will be required. Does not satisfy literature GER.

EN 280 Journalism (3 crs.)

Copy, editing and proofreading skills will be developed with special emphasis devoted to objective news story writing. Some attention is paid to reviewing and sports writing. Does not satisfy literature GER.

EN 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquia in English allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) EN 286, fall semester, EN 287 spring semester

EN 301 Writing and the Teaching of Writing (3 crs.)

Designed for prospective teachers, the course undertakes an investigation of current research in creativity and the writing process with application made to the student's own writing, school curriculum, and good teaching practice.

EN 302 Technical Writing II (3 crs.)

Writing in-depth reports requires sophisticated data gathering and analysis. Specific attention is paid to audience analysis and formatting. (*Prerequisite: EN 201*)

EN 305 History of the English Language (3 crs.)

Origins and development of English. Selected readings in Old and Middle English.

EN 309 Early American Literature (3 crs.)

Readings in journals, histories, seminars, autobiographies, and the beginnings of American fiction. Emphasis on the Puritans, Woodsman, Franklin, Irving, and Cooper.

EN 310 The African American Novel (3 crs.)

This chronological study of the African-American novel from 1853 to the present devotes particular attention to social, political, economic, and cultural factors. Readings may include William Wells Brown, Jean Toomer, Zora Neale Hurston, Richard Wright, James Baldwin, Ralph Ellison, Toni Morrison, and Alice Walker.

EN 312 Modern British Fiction (3 crs.)

This course focuses on earlier twentieth-century British novelists such as Conrad, Forster, Lawrence, Joyce, and Woolf.

EN 320 Chaucer (3 crs.)

This course provides an introduction to Chaucer's poetry and Middle English through readings in *The Canterbury Tales*.

EN 321 The Age of Pope (3 crs.)

The course surveys the literature of the early 18th century with emphasis on the works of Pope, Swift, Gay, Addison and Steele.

EN 322 The Age of Johnson (3 crs.)

The course examines the writings of several major 18th century figures, such as Johnson, Boswell, Fielding, Richardson, Goldsmith and Bonte.

EN 323 Introduction to Linguistics (3 crs.)

The course focuses on the generative-transformational theory of syntactic structure as applied to the English language. It includes selected readings on various aspects of linguistics.

EN 329 Modern American Fiction (3 crs.)

This course examines modern American fiction, focusing on such writers as Fitzgerald, Hemingway, Faulkner, Cather, Anderson and Lewis.

EN 330 Recent American Fiction (3 crs.)

This course includes short fiction and the novel since 1945, and focuses on writers such as Bellow, Didion, Mailer, McCarthy, Oates, Roth, Tyler, Updike and Walker.

EN 331 U.S. Literature in the Nineteenth Century I (3 crs.)

This course analyzes selected readings in such writers as Cooper, Hawthorne, Poe, Emerson, Thoreau, Whitman, and Dickinson.

EN 332 U.S. Literature in the Nineteenth Century II (3 crs.)

This course focuses on the novels and tales of Melville, Twain, Hawthorne, and James.

EN 333 Realism and Naturalism in American Literature (3 crs.)

This course focuses on the fiction of Chopin, Crane, Dreiser, Howells, Norris, Wharton, and the twentieth-century extensions of realism in the fiction of Dos Passos, Stein, and Farrell.

EN 335 Elizabethan and Jacobean Drama (3 crs.)

Reading and discussion of a number of plays by such contemporaries of Shakespeare as Johnson, Marlowe, and Webster with attention to contemporary social developments as well as to the historical development of the English play.

EN 338-339 Honors Tutorial (3 crs. each semester)

This tutorial involves special topics in English. It is open to All-College and Departmental Honors students and meets for three hourly meetings weekly. (*Prerequisite: consent of the department*)

EN 340 Literature of the English Renaissance (3 crs.)

This course examines the non-dramatic literature of the Age of Shakespeare including the works of Sidney, Spenser, Nashe, Marlowe, and Drayton. Textual analysis is emphasized but the historical, social, and cultural background of this period is also considered.

EN 341 Literature of the Continental Renaissance (3 crs.)

This course surveys representative works of Petrarch, Boccaccio, Machiavelli, Erasmus, Castiglione, Rabelais, Cellini, Montaigne, Cervantes, and Ronsard representing prevailing literary themes and techniques.

EN 342 Shakespeare: Histories and Comedies (3 crs.)

This course provides examples of Shakespeare's art in dominant Renaissance dramatic forms and with some of his recurring thematic concerns. In addition, study of the Histories and Comedies demonstrates Shakespeare's growth in the dramatic use of language. Plays for study will include *The Comedy of Errors*, *Two Gentlemen of Verona*, *Much Ado About Nothing*, *As You Like It*, *Twelfth Night*, *Richard III*, *Richard II*, *Henry IV, Parts I and II*, and *Henry V*.

EN 343 Shakespeare: Tragedies and Late Plays (3 crs.)

This course offers studies in the various dimensions of the tragic vision of man. In addition, study of the late plays provides the student with examples of dramatic works that proceed beyond the tragic dimension. Selected plays will include *Hamlet*, *King Lear*, *Othello*, *Macbeth*, *Anthony and Cleopatra*, *Measure for Measure*, *The Winter's Tale*, and *The Tempest*.

EN 346 Southern Literature (3 crs.)

This course focuses on the personal, cultural, and social dimensions of Southern life in works by William Faulkner, Tennessee Williams, Katherine Anne Porter, Flannery O'Connor, Eudora Welty, William Styron, and Peter Taylor.

EN 350 Recent British Fiction (3 crs.)

This course focuses on British fiction since 1945. Writers to be studied may include Golding, Graves, Lessing, Murdoch, Greene, Ballard, and Powell.

EN 353 Modern European Drama (3 crs.)

Students will study the main forces in Modern European drama starting with Ibsen.

EN 356 Modern American Drama (3 crs.)

Students will read and discuss selected plays of dramatists from O'Neill to Albee.

EN 360-361 The English Novel I-II (3 crs. for each semester)

The course traces the development of the English novel, including such writers as Defoe, Richardson, Fielding, Smollett, Sterne, Austen, and Scott in the first semester, and Dickens, the Brontës, Thackeray, Eliot, Trollope, Conrad, and Hardy in the second semester.

EN 365 Victorian Prose and Poetry (3 crs.)

The major emphasis is placed on the poetry of Tennyson, Browning, and Arnold, but the works of other nineteenth-century poets such as Hopkins and Hardy will also be read and discussed. The essays of Carlyle, Ruskin, Arnold, Newman, Huxley, and others are studied in conjunction with the poetry.

EN 366 Tennyson, Browning, and Arnold (3 crs.)

These major nineteenth-century authors are studied in some detail, with particular reference to the historical, social, and cultural milieu within which they wrote.

EN 367 English Literature of the Late Victorian and Edwardian Periods (3 crs.)

The major writers of the late nineteenth and early twentieth centuries are examined from aesthetic, social, and intellectual vantage points, with readings in such prose writers as Gissing, James, Wilde, Beerbohm, Carroll, Wells, Hardy, Corvo, Forster, and Conrad, and such poets as Rossetti, Swinburne, Morris, Hopkins, and Yeats.

EN 370 Seventeenth Century Literature (3 crs.)

The course is an introduction to the prose and poetry of the seventeenth century in England, exclusive of Milton. Such writers as Donne, Jonson, Bacon, Burton, Browne, and Dryden will be examined, and various persistent elements, such as the classical influence, will be explored.

EN 380 Milton (3 crs.)

The course includes the main works of Milton: *Paradise Lost*, *Paradise Regained*, and *Samson Agonistes*, the minor poetic works, and selected prose.

School of Arts and Sciences

EN 381 Irish Literature I (3 crs.)

The course is a survey of earlier Irish literature in translation from the Gaelic and in English. It includes selections from the epic poem, *Tain Bo Cuailnge*, Gaelic lyric poetry (600-1800 A.D.); the pioneering fiction of Maria Edgeworth and William Carleton; and the poetry of the nineteenth-century balladeers, Thomas Moore, Thomas Davis, James Clarence Managan, and Sir Samuel Ferguson. The accomplishments of the Irish literary revival of 1890-1920; fiction by Daniel Corkery, George Moore, Seamus O'Kelly, and James Joyce; poetry and plays by William Butler Yeats; and plays by John M. Synge.

EN 382 Irish Literature II (3 crs.)

This course is a survey of later modern and contemporary Irish literature including the later fiction of James Joyce and the later poetry of William Butler Yeats; the plays of Sean O'Casey, Brendan Behan, Samuel Beckett, and Brian Friel; the poetry of Austin Clarke, Patrick Kavanagh, Thomas Kinsella, John Montague, Richard Murphy, and Seamus Heaney; the fiction of Liam O'Flaherty, Sean O'Faolain, Frank O'Connor, Flann O'Brien, Mary Lavin, William Trevor, Edna O'Brien, and others.

EN 386 English Romantic Poets (3 crs.)

The course examines selected poetry and prose of Wordsworth, Coleridge, Shelley and Keats with the principal objective of understanding the character and modes of expression of each poet's imaginative vision. Consideration is given to historical background and to developments in philosophy and aesthetic theory which have a direct bearing on Romantic poetry.

EN 389 Topics in Writing (3 crs.)

The course explores writing on different subjects from semester to semester according to interest and demand. Typical topics may include: writing the research paper, the narrative essay, the personal journal, writing literary criticism, etc.

EN 390 Theories of Writing (3 crs.)

The course examines fundamental rhetorical, linguistic, social, and discourse theories as they pertain to the writing process. Frequent writing will be assigned. The course is required of all students in the writing concentration.

EN 391 Modern Literary Criticism (3 crs.)

This course examines the major critics and critical movements of the 20th century, particularly in the United States and England, but with some attention to continental critical thought. Critics and theorists such as T.S. Eliot, I.A. Richards, John Crowe Ransom, Edmund Wilson, Lionel Trilling, Northrop Frye, Raymond Williams, and Roland Barthes are studied. The principles and methods of several kinds of criticism, formalist, Marxist, psychoanalytical, structuralist, and post-structuralist, are examined.

EN 393 Modern British Poetry (3 crs.)

The major British poets of the twentieth century are studied with particular emphasis on the works of Hopkins, Hardy, Yeats, Eliot, Alden and Thomas.

EN 394 Modern American Poetry (3 crs.)

The major American poets of the twentieth century are studied with particular emphasis on the works of Robinson, Frost, Crane, Auden, Williams, and Stevens.

EN 395 Studies in Recent American Poetry (3 crs.)

American poets practicing from 1945 to the present are surveyed. Among these poets may be Robert Lowell, John Berryman, Theodore Roethke, Richard Wilbur, Adrienne Rich, Anne Sexton, Sylvia Plath, James Wright, Richard Hugo, Randall Jarrell, Gwendolyn Brooks, Robert Hayden, and Gary Snyder. Others may be included from time to time.

EN 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the departmental honors committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project.

EN 490 Literary Studies in Oxford (3 crs.)

Close readings of several major works emphasizing the dynamic relationship between literary texts and the cultural and intellectual environments in which they were created. Authors and periods studied will vary. (This is a special program in England at Oxford University during July. Additional fees are required.) (*Prerequisite: students will normally be expected to be in their junior or senior year*)

EN 494 Seminar (3 crs.)

The seminar treats selected topics in language and literature.

EN 495 Seminar in English Literature (3 crs.)

This seminar, primarily for seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in English literature.

EN 496 Seminar in American Literature (3 crs.)

This seminar, primarily for seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in American literature.

EN 497 Seminar in World Literature (3 crs.)

This seminar, primarily for seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in world literature.

EN 498 Internship in English (3-15 crs.)

The internship provides off-campus work-study experience in areas related to the expanding discipline of English, such as editing, journalism, media, public relations, and technical writing. Internship credits are not applicable to the 36 credits required for the major. (*Prerequisite: consent of the department; formal application required*)

EN 499 Directed Study in English (1-3 crs.)

Directed study is open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department; formal application required*)

Other Approved Courses:

EN 283-284 Major Canadian Writers in English I-II

EN 314 Medieval English Literature

EN 397 Film Study: The Director's Art

EN 398 Film Study: Genres

EN 500 Theory and Discipline of English (3 crs.)

This course will examine the backgrounds and techniques of literary scholarship. Some acquaintance with critical approaches to literature, as well as comprehensive experience in the major genres and periods of English and American literature, will be assumed. Required of MA and M.A.T. candidates in English.

EN 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

EN 503 Directed Study (credit to be arranged)

Directed study is designed for the graduate student who desires to study selected topics in a specific field. For details consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

EN 510 Theory and Discipline of English for Teachers (3 crs.)

This course will review major critical stances and their influences on curriculum, examine the canon taught in schools, and analyze and evaluate the prevailing pedagogic models and definitions of literacy.

EN 520 Studies in Shakespeare and the Renaissance (3 crs.)

Students will analyze selected plays by Shakespeare with special emphasis in each play on the received tradition and on the relationship among the significant aspects of the language, the characters, and the structures. In addition, attention will be given to the use of source material and to the philosophical, social, and scientific currents of the age. Finally, students will be examining traditional and contemporary critical views of the plays.

EN 527 Studies in Seventeenth Century Literature (3 crs.)

Students will examine selected writings in prose and poetry from Donne to Dryden for the purpose of understanding the poetic themes and styles as well as the social, philosophical, and scientific currents of the period. Among the writers to be considered are Donne, Jonson, Herrick, Herbert, Crashaw, Lovelace, Suckling, Marvell, Dryden; and, Bacon, Bruton, Browne, Hobbes, Locke, and the character writers. Attention will be given to the women of the age, such as Jane Cavendish, Bradstreet, Margaret Cavendish, Philips, Behn, Killigrew, Barker, and Pix. Special attention will be given to tracing the shifting emphasis in style and technique concomitant to emerging social, political, religious, and philosophical concerns.

EN 529 Donne and the Metaphysical Poets (3 crs.)

Donne, Herbert, Vaughan, Marvell and Crashaw are the subjects of intensive study.

EN 531 Studies in Eighteenth Century Literature (3 crs.)

This course is an intensive exploration of the poetry, prose fiction, drama, and intellectual prose by major and minor authors from Dryden, Pope, Swift, Defoe, and Fielding to Johnson, Boswell, Burke, Austen and Blake.

EN 537 Studies in British Romanticism (3 crs.)

This course is an in-depth study of the poetry and prose of the Romantic Period, including writers such as Wordsworth, Coleridge, Byron, Blake, Shelley, Keats, Charlotte Smith, Mary Shelley, and Dorothy Wordsworth.

EN 541 Studies in the Novel (3 crs.)

Several novelists chosen from a single period will be read closely. Emphasis will be placed on the development of each novelist within a specific literary and historical context. The period under consideration will vary from year to year.

EN 542 Studies in Victorian Literature (3 crs.)

Driven by intellectual and social conflict and marked by the emergence of new classes of readers and writers, the Victorian Period produced a literature of unique and enduring value. This course will examine major works of the period in a variety of genres—paying particular attention to the impact of science, religion, history, philosophy, ethnicity, gender definition, and the arts on literary achievement.

EN 543 Studies in Eighteenth-Century British Poetry (3 crs.)

A study of the development of British poetry in the eighteenth century, focusing on such poets as Pope, Gray, Thomson, Johnson, and Cowper.

EN 551 American Transcendentalism (3 crs.)

Development and influence of American Transcendentalism in the literature of Emerson, Thoreau, and Alcott will be investigated.

EN 552 Contemporary American Fiction (3 crs.)

Intensive examination of two or more major figures, 1945 to the present. Defining postmodern fiction. Emphasis on innovative narrative structures and textures in the work of Nabokov, Hawkes, Barth, Barthelme, Pynchon, Morrison and others.

EN 562 Studies in Modern Drama (3 crs.)

Readings and discussion of significant works from among such key writers as Shaw, Jarry, Strindberg, Chekhov, Appollinaire, Pirandello, Cocteau, Lady Gregory, Yeats, Schitzler, Synge, O'Neil, O'Casey, Odets, Lorca, Sartre, Anouilh, Eliott, Brecht, Miller, Williams, Beckett, Ionesco, Pinter, Stoppard, Mamet, Carol Churchill, and Guare, as well as such earlier writers as George Buchner (1813-1837) whose work remained unknown until the Twentieth Century. Also studied may be such contributors to theatre aesthetic as Gordan Craig, Kenneth MacGowan and Robert Edmund Jones, Sheldon Cheney, Julian Beck, and Judith Malina, and Robert Wilson.

School of Arts and Sciences

EN 565 Modern Literary Theory (3 crs.)

This course will focus on the major American and European schools of criticism that have influenced literary studies in the past forty years. Attention will be given to formalist, structuralist, phenomenological, post-structural, reader-response, Marxist, psycho-analytical, hermeneutic, feminist, and new historical schools of criticism.

EN 570 Graduate Seminar in American Literature (3 crs.)

A particular author, group of authors, or theme in American literature will be studied in depth. Topics will change from year to year.

EN 580 Graduate Seminar in English Literature (3 crs.)

A particular author, group of authors, or theme in English literature will be studied in depth. Topics will change from year to year.

EN 590 Graduate Seminar in World Literature (3 crs.)

A particular author, group of authors, or theme in world literature will be studied in depth. Topics will change from year to year.



Department of Foreign Languages

Faculty

Chairperson: Professor Stanley Hamilton

Professors: Robert Arruda, Jacqueline Enos, Lenore Padula, Barbara Ward

Associate Professors: Robert Briggs, Margaret Snook

Assistant Professor: Atandra Mukhopadhyay

Undergraduate Programs

Bachelor of Arts

The Foreign Language Department offers students an opportunity to gain practical working knowledge of one or more of six foreign languages. Students may choose any of these six languages offered by the department unless otherwise advised by the requirements of their academic major. Students who are continuing the study of foreign languages at Bridgewater State College should do so at the earliest opportunity.

The department currently offers undergraduate majors in French or Spanish with academic minors possible in French, German, Spanish, Italian, Russian, and Portuguese. The department majors seek to develop a good control of the four language skills, and a broad acquaintance with the salient characteristics of the literature and civilization of the language being studied.

A grade of C or above in the 151-152 course sequence is required for continuation as a language major. Between thirty and thirty-six semester hours are required for a foreign language major; a major consists of a core of nine courses and up to three electives. Not more than one "D" for a semester course in the major shall be accepted to fulfill the requirements of the program. In the fall of the sophomore, junior and senior years, language majors will participate in a departmental interview conducted in the foreign language. This interview is for diagnostic purposes.

For all prerequisites, equivalent course credit or preparation will be considered.

The Department of Foreign Languages participates in the multidisciplinary minors in Canadian Studies, Russian and East European Studies. For specific information on these programs, consult the catalog section *Multidisciplinary and Pre-Professional Programs*.

French Major

Core Requirements:

LF 151 Intermediate French
LF 252 Reading in French
LF 271 Patterns of the French Language
LF 272 Advanced French Composition
LF 281 French Civilization I
LF 282 French Civilization II
LF 411 Survey of French Literature III
LF 412 Seminar in French Literature
LF 471 Extemporaneous Use of French

School of Arts and Sciences

Electives:

- LF 311 Survey of French Literature I
- LF 312 Survey of French Literature II
- LF 371 Advanced French Conversation

SACHEM consortium courses and study abroad are available for transfer purposes.

Spanish Major

Core Requirements:

- LS 252 Reading in Spanish
- LS 272 Spanish Composition
- LS 281 Spanish Conversation and Phonetics
- LS 291 Spanish Civilization
- LS 292 Spanish-American Civilization
- LS 311 Survey of Spanish Literature
- LS 312 Topics in Spanish Literature
- LS 421 Survey of Spanish-American Literature
- LS 422 Topics in Spanish-American Literature

Electives:

- LS 151 Intermediate Spanish
 - LS 371 Extemporaneous use of Spanish
 - LS 490 Seminar in Hispanic Literature
- SACHEM consortium courses and study abroad are available for transfer purposes.

Double Major With Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in French or Spanish and Elementary Education, Early Childhood Education or Special Education for certification purposes. Appropriate advising materials with suggested course sequences are available.

Language Minor

Language minors are required to take 18 semester hours in the foreign language, which may include the 101-102 level. The choice of subsequent courses may be determined in consultation with the department head.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific requirements. Students intending

to qualify for French or Spanish certification should consult the chairperson of the Department of Foreign Language as early as possible.

GER Foreign Language Requirement

All students must successfully complete one semester of a foreign language at the 102 level of the course. All students who continue the study of a foreign language previously studied must take the Placement Examination. Students who are continuing the study of foreign languages at Bridgewater State College should do so at the earliest opportunity.

Students who have passing grades in four levels of the same secondary foreign language are exempt from the General Education Requirement in Foreign Language. With the exception of Advanced Placement foreign language courses, credit may not be granted to students exempt from one or two semesters of the General Education Requirement in Foreign Language because of study of four secondary levels of the same foreign language or because of a placement test score.

Citizens of the United States or residents who speak a language other than English at home should consult the chairperson regarding the GER in Foreign Languages.

Overseas Study Opportunities

The Department of Foreign Languages urges its majors and minors to study abroad and can offer information on available study plans. The Study Abroad Office, Student Affairs, can assist students. Any student contemplating study abroad should consult the department with all pertinent documentation. Final acceptance of credit will be determined upon receipt of official transcripts and supporting material and, in some cases, may not be equivalent to the credits earned in a regular semester or year at Bridgewater.

Graduate Programs

Master of Arts in Teaching

The Department of Foreign Languages offers a program leading to the degree of Master of Arts in Teaching with a concentration in French or Spanish. The department requires an interview of all prospective candidates before making its final recommendation regarding admission to the program. Because enrollment problems in recent years have interrupted course sequence, interested persons should speak with the chairperson prior to submitting formal application.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the Graduate School section of this catalog. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult the M.A.T. degree requirements in the *Graduate School* section of this catalog), and a minimum of 18 appropriate credits in a single language (credits approved by the program adviser on the basis of the background, interests, and needs of the student). Language courses need not be taken in sequence.

Liberal arts graduates seeking high school teacher certification through the M.A.T. program should consult the *Department of Secondary Education and Professional Programs* section of this catalogue for detailed requirements.

The departmental offerings listed below include the following courses which may not be taken for graduate credit:

All courses at the 100 level

LS 495 Seminar in Spanish or Spanish American Literature

FL 300 Languages of the World

FL 499 Directed Study in Foreign Languages

School of Arts and Sciences

Course Offerings*

Arabic

LA 101 Elementary Arabic I (3 crs.)

An introduction to elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (first-semester level).

LA 102 Elementary Arabic II (3 crs.)

The further study of elementary syntactic, semantic, phonetic and paralinguistic structure is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: LA 101; or Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (second-semester level).

Chinese

LC 101 Elementary Chinese I (3 crs.)

An introduction to elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (first-semester level).

LC 102 Elementary Chinese II (3 crs.)

The further study of elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: LC 101; or Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (second-semester level).

English as a Second Language

LE 101 English as a Second Language I (3 crs.)

An introduction to elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (first-semester level).

LE 102 English as a Second Language II (3 crs.)

The further study of elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: LE 101; or Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (second-semester level).

French

LF 101 Elementary French I (3 crs.)

An introduction to elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (first-semester level).

LF 102 Elementary French II (3 crs.)

The further study of elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: LF 101; or Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (second-semester level).

LF 151 Intermediate French (3 crs.)

A review of French grammar with emphasis given to reading, writing, listening, and speaking; systematic laboratory practice; an introduction to aspects of Francophone culture and literature. (*Prerequisite: LF 102*)

LF 252 Reading in French (3 crs.)

The student is introduced to the reading, analysis, and discussion of semi-edited modern literary and cultural texts from France, Canada, Africa, and the Caribbean. The emphasis is on the development of reading comprehension skills and vocabulary. Conducted in French. (*Prerequisite: LF 151 or consent of instructor*)

*See pages 75-76 for general information regarding course offerings.

Foreign Languages

LF 271 Patterns of the French Language (3 crs.)

Consideration given to writing patterns and to oral patterns with emphasis on lexicon and phonetics; systematic laboratory practice. Conducted in French. (*Prerequisite: LF 252 or consent of the instructor*)

LF 272 Advanced French Composition (3 crs.)

Practice in composition utilizing sources from the French-speaking world; systematic laboratory practice. Conducted in French. (*Prerequisite: LF 252 or consent of the instructor*)

LF 281-282 French Civilization I-II (3 crs. for each semester)

Consideration given to oral improvement through discussion of topics of French civilization through the centuries. Conducted in French. (*Prerequisite: LF 252 or consent of the instructor*)

LF 311 Survey of French Literature I (3 crs.)

Principal movements of the Middle Ages and sixteenth century, including works of Villon, Rabelais and Ronsard. Conducted in French. (*Prerequisite: LF 271 or LF 272, or consent of the instructor*)

LF 312 Survey of French Literature II (3 crs.)

Principal movements of the seventeenth and eighteenth centuries, including works of Corneille, Pascal, Moliere and Racine. Conducted in French. (*Prerequisite: LF 311 or consent of the instructor*)

LF 371 Advanced French Conversation (3 crs.)

Concentration on fluent expression in formal and informal speech; systematic laboratory practice. Conducted in French. (*Prerequisite: LF 281-282 or consent of the instructor*)

LF 411 Survey of French Literature III (3 crs.)

Principal movements of the nineteenth and twentieth centuries, including works of Balzac, Hugo, Zola, Camus, Gide and Sartre. Conducted in French. (*Prerequisite: LF 311 or LF 312, or consent of the instructor*)

LF 412 Seminar in French Literature (3 crs.)

Topics will be drawn from theme, genre, author and period. Conducted in French. (*Prerequisite: LF 411 or consent of the instructor*)

LF 471 Extemporaneous Use of French (3 crs.)

Advanced fluency in improvised situations with emphasis on contemporary idioms; systematic laboratory practice. Conducted in French. (*Prerequisite: LF 371 or consent of the instructor*)

Other Approved Courses:

LF 201 French Literature of the Middle Ages

LF 211 Twentieth Century French-Canadian Writers

LF 222 Introduction to French-Canadian Literature

LF 231 Eminent Realists and Naturalists in 19th Century French Literature in English Translation

LF 241 French Literature of the Absurd in English Translation

LF 261 Introduction to the Civilization and Language of French Canada

LF 301 Seventeenth Century French Literature

LF 352 Eighteenth Century French Literature

LF 401 Nineteenth Century French Literature

LF 451 Twentieth Century French Literature

LF 501-502 Graduate Seminar in French Literature I-II (3 crs. for each semester)

An in-depth survey of approximately eight centuries of French Literature, with emphasis on oral and written analyses of special literary problems. Designed primarily for MAT degree candidates already having some knowledge of French literature. Conducted in French.

LF 503 Personalities in French Civilization (3 crs.)

A review of French civilization through analyses of the contributions of a selection of her national heroes. Intended for, but not necessarily limited to, holders of an undergraduate degree in French. Conducted in French. (*Prerequisite: consent of the instructor*)

LF 504 French Civilization Since 1944 (3 crs.)

Social, political, geographic, economic and literary dimensions of French civilization since the second World War. Conducted in French.

German

LG 101 Elementary German I (3 crs.)

An introduction to elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (first-semester level).

LG 102 Elementary German II (3 crs.)

The further study of elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: LG 101; or Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (second-semester level).

LG 151-152 Intermediate German I-II (3 crs. for each semester)

A systematic review of basic German grammar. Graded reading selections and an introduction to aspects of German culture. (*Prerequisite: LG 102*)

LG 191-192 Scientific German I-II (3 crs. for each semester)

An introduction to the reading and translating of scientific material. Open to science majors as a substitution for LG 151, 152. (*Prerequisite: LG 102*)

School of Arts and Sciences

LG 282 German Conversation and Civilization (3 crs.)

Designed to develop further the student's command of spoken German. Discussion topics will center upon aspects of German civilization and culture. Conducted in German. (*Prerequisite: LG 182*)

Other Approved Courses:

LG 181-182 Advanced German I-II

LG 201-202 Survey of German Literature I-II

LG 262 German Life and Literature under Hitler in English

LG 272 Aspects of German Culture and Civilization in English

LG 301 Modern German Literature

LG 310 The Modern German Novel in English Translation

LG 320 Contemporary German Drama in English Translation

LG 330 Major German Writers in English Translation

LG 340 The German Novella in English Translation

LG 351 German Romanticism

LG 460 Seminar in German Literature

Italian

LT 101 Elementary Italian I (3 crs.)

An introduction to elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (first-semester level).

LT 102 Elementary Italian II (3 crs.)

The further study of elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: LT 101; or Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (second-semester level).

LT 151-152 Intermediate Italian I-II (3 crs. for each semester)

A continuation of Elementary Italian, with stress on essential grammatical features, oral work, and reading and writing development in the language. (*Prerequisite: LT 102*)

Other Approved Courses:

LT 181-182 Advanced Italian I-II

Japanese

LJ 101 Elementary Japanese I (3 crs.)

An introduction to elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (first-semester level).

LJ 102 Elementary Japanese II (3 crs.)

The further study of elementary syntactic, semantic, phonetic and paralinguistic structure is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: LJ 101; or Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (second-semester level).

Portuguese

LP 101 Elementary Portuguese I (3 crs.)

An introduction to elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (first-semester level).

LP 102 Elementary Portuguese II (3 crs.)

The further study of elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: LP 101; or Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (second-semester level).

LP 151-152 Intermediate Portuguese I-II (3 crs. for each semester)

A review of basic grammar and pronunciation and a more advanced study of these two aspects of the language. Reading, writing, and oral proficiency will be stressed. (*Prerequisite: LP 102*)

Russian

LR 101 Elementary Russian I (3 crs.)

An introduction to elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (first-semester level).

LR 102 Elementary Russian II (3 crs.)

The further study of elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: LR 101; or Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (second-semester level).

LR 151-152 Intermediate Russian I-II (3 crs. for each semester)
Review and expansion of fundamentals with more detailed reading and analysis of structure. Emphasis will be placed on scientific Russian in other majors as requested by the student. (*Prerequisite: LR 102*)

Other Approved Courses:

LR 181-182 Advanced Russian I-II

Spanish

LS 101 Elementary Spanish I (3 crs.)

An introduction to elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: Placement Examination, for students continuing previous language study*) Satisfies the GER in Foreign Language (first-semester level).

LS 102 Elementary Spanish II (3 crs.)

The further study of elementary syntactic, semantic, phonetic and paralinguistic structures is offered. Pertinent everyday cultural concepts are discussed. Relevant comparison and contrast with the native language is treated. Functional communication in the second language in a controlled environment is the principal objective of the course. (*Prerequisite: LS 101; or Placement Examination for students continuing previous language study*) Satisfies the GER in Foreign Language (second-semester level).

LS 151 Intermediate Spanish (3 crs.)

A review of Spanish grammar with emphasis given to reading, writing, listening and speaking; systematic laboratory practice; an introduction to aspects of Hispanic culture and literature. Conducted in Spanish. (*Prerequisite: LS 102*)

LS 252 Reading in Spanish (3 crs.)

The student is introduced to the reading, analysis, and discussion of semi-edited modern literary and cultural texts from Spain, Latin America, and the Caribbean. The emphasis is on the development of reading comprehension skills and vocabulary. Conducted in Spanish. (*Prerequisite: LS 151 or consent of the instructor*)

LS 271 Patterns of the Spanish Language (3 crs.)

Consideration given to writing patterns and to oral patterns with emphasis on lexicon and phonetics; systematic laboratory practice. Conducted in Spanish. (*Prerequisite: LS 252 or consent of the instructor*)

LS 272 Spanish Composition (3 crs.)

The student develops writing skills utilizing sources from the Spanish-speaking world. Different writing skills and styles are introduced and practiced. Systematic review is conducted with emphasis on more advanced language patterns. Conducted in Spanish. (*Prerequisite: LS 252 or consent of the instructor*)

LS 281 Spanish Conversation and Phonetics (3 crs.)

Fluent expression in formal and informal speech is stressed. Oral proficiency is improved by the systematic study of the sound system and lexicon. Conducted in Spanish. (*Prerequisite: LS 252 or consent of the instructor*)

LS 291 Spanish Civilization (3 crs.)

Readings and discussion of topics related to Spanish civilization through the centuries are treated. Conducted in Spanish. (*Prerequisite: LS 272 or consent of the instructor*)

LS 292 Spanish-American Civilization (3 crs.)

Readings and discussions of topics related to South American and Caribbean civilizations from pre-Columbian to modern times are treated. Conducted in Spanish. (*Prerequisite: LS 272 or consent of the instructor*)

LS 311 Survey of Spanish Literature (3 crs.)

The course introduces the student to the principal literary movements from the Middle Ages to the present. Representative authors such as Ruiz, Cervantes, Lope de Vega, Moratin, Espronceda, Perez Galdos, Unamuno, Baroja, Garcia Lorca, and Cela are treated. Conducted in Spanish. (*Prerequisite: LS 271 or LS 291, or consent of the instructor*)

LS 312 Topics in Spanish Literature (3 crs.)

Topics will focus on a particular genre, such as the short story or the theatre, with intensive study of selected works from modern writers. Conducted in Spanish. (*Prerequisite: LS 311 or consent of the instructor*)

School of Arts and Sciences

LS 371 Extemporaneous Use of Spanish (3 crs.)

Fluent expression in Spanish is enhanced in improvised situations. The emphasis is on contemporary idioms and regional and dialectal speech patterns. Systematic laboratory practice is provided. Conducted in Spanish. (*Prerequisite: LS 252 or consent of the instructor*)

LS 421 Survey of Spanish-American Literature (3 crs.)

Principal literary movements from the colonial times to the present will be introduced. Discussion will include representative works of El Inca Garcilaso del la Vega, Sor Juana Ines de la Cruz, Dario, Rulfo, Garcia Marquez, and Fuentes. Conducted in Spanish. (*Prerequisite: LS 272 or consent of the instructor*)

LS 422 Topics in Spanish-American Literature (3 crs.)

Topics will focus on a particular genre, such as the short story or the theatre, with intensive study of selected works from modern writers. Conducted in Spanish. (*Prerequisite: LS 421 or consent of the instructor*)

LS 490 Seminar in Hispanic Literature (3 crs.)

Topics will be drawn from theme, genre, author, and period. This course may be repeated for credit. Conducted in Spanish. (*Prerequisite: LS 312 or LS 422 or consent of the instructor*)

Other Approved Courses:

LS 110 Conversational Spanish for Medical Personnel

LS 210 Latin American Poetry in English Translation

LS 220 The Contemporary Latin American Novel in English Translation

LS 230 Contemporary Latin American Short Story in English Translation

LS 301 The Golden Age of Spanish Literature

LS 310 Contemporary Latin American Short Story

LS 320 Latin American Poetry

LS 351 Cervantes

LS 381 The Middle Ages

LS 401 Nineteenth Century Spanish Literature

LS 410 Latin American Novel: Early 20th Century

LS 420 The Contemporary Latin American Novel

LS 451 Twentieth Century Spanish Literature

LS 495 Seminar in Spanish American Literature

LS 507 Advanced Composition and Stylistics for Graduate Students (3 crs.)

Review of advanced grammar. Exercises in translation from English into Spanish of literary and critical materials. Free composition and training in the use of stylistic devices. Conducted in Spanish. (*Prerequisite: LS 271 or LS 281*)

LS 511-512 Masterpieces of Spanish-American

Literature I-II (3 crs. for each semester)

An intensive study of selected works from the Conquest period, Colonial period, Modernism, and the twentieth century. Conducted in Spanish. (*Prerequisite: LS 281 or consent of the instructor*)

LS 520 Topics in Spanish-American Civilization (3 crs.)

A study of Spanish-American thought and culture as expressed in its history, essay, art and literature. Conducted in Spanish. (*Prerequisite: LS 281 or consent of the instructor*)

LS 521 Topics in Spanish Civilization (3 crs.)

A study of Spanish thought and culture as expressed in its history, essay, art and literature. Conducted in Spanish. (*Prerequisite: LS 281 or consent of the instructor*)

LS 525 Masterpieces of Spanish Literature I (3 crs.)

An intensive study of selected works from the Middle Ages to 1700 including: Poema de Mio Cid, El romancero, El libro de buen amor, La Celestina, El Renacimiento, El Siglo de Oro. Conducted in Spanish. (*Prerequisite: LS 281 or consent of the instructor*)

LS 526 Masterpieces of Spanish Literature II (3 crs.)

An intensive study of selected works of Twentieth Century authors including: Ruben Dario, Miguel de Unamuno, Pio Baroja, Juan Ramon Jimenez, Federico Garcia Lorca, Camilo Jose Cela, Ana Maria Matute, Juan Goytisolo, Antonio Buero Vallejo. Conducted in Spanish. (*Prerequisite: LS 281 or consent of the instructor*)

FL 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman Honors Colloquia in Foreign Language allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*)

FL 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquia in Foreign Language allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*)

FL 324 Applied Linguistics in the Teaching of Foreign Languages (3 crs.)

The course will treat first, second and foreign language learning in home and educational settings. Emphasis is placed on differences between linguistic and pedagogical grammars, strong versus weak contrastive hypotheses and on the notion of transitional competence. Research techniques are analyzed. (*Prerequisite: A minimum of 18 credits in the foreign language in which certification is sought.*)

FL 330 Teaching English as a Second Language (3 crs.)

Theoretical, historical and practical considerations of the teaching of English as a second language.

FL 338-339 Honors Tutorial (3 crs. each semester)

Special topics in Foreign Languages. Open to All-College and Departmental Honors students. Three hourly meetings weekly. (*Prerequisite: consent of the department*)

FL 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the departmental honors committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the departmental honors committee.

FL 498 Internship in Foreign Languages (3-15 crs.)

An off-campus experience to expand the cultural and occupational potential of the student using a foreign language in a working environment. (*Prerequisite: consent of the department*)

FL 499 Directed Study in Foreign Language (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department*)

Other Approved Courses:

FL 300 Languages of the World

FL 310 Comparative Medieval Romance Literatures in English Translation

FL 311 Dante and Medieval Culture in Translation

FL 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

FL 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.



Department of History

Faculty

<i>Chairperson:</i>	Professor Gerald Doiron
<i>Professors:</i>	David Culver, Peter Karavites, John Myers, Chester Nowak, Lucille O'Connell, Philip Silvia, Jr., Benjamin Spence, Thomas Turner, Alfred Wolff
<i>Associate Professor:</i>	Jean Stonehouse
<i>Assistant Professors:</i>	Lucille Fortunato DeLisle, De-min Tao

Undergraduate Programs

Bachelor of Arts

The objectives of the department are to contribute to the general education program by offering history courses to all students; to prepare students planning to teach history and to offer advanced courses to those majoring in the elementary curriculum to enable them to enrich their teaching at that level; to enable students to do graduate or associated work in the field of history.

The department recommends that its majors select a minor or interdisciplinary program which will complement the major program. History majors electing Secondary Education are strongly urged to take elective courses in geography, political science, economics and the behavioral sciences in order to meet present employment expectations.

Only six hours of 100-level and six hours of 200 level courses may be applied toward a history major or minor.

History Major

Required courses:

HI 111 Western Civilization to 1715
or
HI 121 The Ancient World
HI 112 Western Civilization since 1715
or HI 124 The World since 1815
HI 221 U.S. History and Constitutions to 1865
HI 222 U.S. History and Constitutions since 1865

One course from each of the following areas:

Area III	Ancient-Medieval
Area IV	Early Modern--Modern
Area V	Non-US, Non-Western, National Histories
Area VI	U.S. History to 1877
Area VII	U.S. History since 1877
Area VIII	U.S. History-Topical

Only six hours of 100 level and six hours of 200 level courses may be applied toward a history major or minor.

No more than three hours from the following courses may be used toward the 30 hours required for a history major: HI 492, 498, 499 (except for the Community History Concentration).

History Major/Middle School or High School Education

History (Teacher of History Grades 5-9)

Major requirements (in addition to the core):
ED 450 Strategies of Teaching History in the Middle School

Cognate requirement:
SE 213 The Special Needs Learner in the Middle School

Required courses:
HI 111 Western Civilization to 1715
or
HI 121 The Ancient World
HI 112 Western Civilization since 1715
or
HI 124 The World since 1815
HI 221 U.S. History and Constitutions to 1865
HI 222 U.S. History and Constitutions since 1865

One course from each of the following areas:
Area III Ancient Medieval
Area IV Early Modern--Modern
Area V Non-US, Non-Western, National Histories
Area VI U.S. History to 1877
Area VII U.S. History since 1877
Area VIII U.S. History-Topical

Only six hours of 100 level and six hours of 200 level courses may be applied toward a history major or minor.

No more than three hours from the following may be used toward the 30 hours for a history major: HI 492, 498, 499.

History (Teacher of History Grades 9-12)

Required courses:
HI 111 Western Civilization to 1715
or
HI 121 The Ancient World
HI 112 Western Civilization since 1715
or
HI 124 The World since 1815
HI 221 U.S. History and Constitutions to 1865
HI 222 U.S. History and Constitutions since 1865

One course from each of the following areas:

Area III Ancient Medieval
Area IV Early Modern--Modern
Area V Non-US, Non-Western, National Histories
Area VI U.S. History to 1877
Area VII U.S. History since 1877
Area VIII U.S. History-Topical

Only six hours of 100 level and six hours of 200 level courses may be applied toward a history major or minor.

No more than three hours from the following may be used toward the 30 hours for a history major: HI 492, 498, 499.

History (Teacher of Social Studies Grades 5-9)

Major requirements (in addition to the core):
ED 450 Strategies of Teaching Social Studies in the Middle School

Cognate requirement:
SE 213 The Special Needs Learner in the Middle School

Required courses:
HI 111 Western Civilization to 1715
or
HI 121 The Ancient World
HI 112 Western Civilization since 1715
or
HI 124 The World since 1815
HI 221 U.S. History and Constitutions to 1865
HI 222 U.S. History and Constitutions since 1865

One course from each of the following areas:
Area III Ancient Medieval
Area IV Early Modern--Modern
Area V Non-US, Non-Western, National Histories
Area VI U.S. History to 1877
Area VII U.S. History since 1877
Area VIII U.S. History-Topical

Cognate Courses:
Political Science - six hours
PO 172 American Government: The Federal System
PO 277 American Government: State and Local Government
PO 260 International Relations

Economics - three hours
EC 102 Principles of Microeconomics

School of Arts and Sciences

Geography - six hours
GS 110 Human Geography
and
Any regional geography

Sociology/Anthropology - six hours
SO 102 Introduction to Sociology
and either
AN 100 Introduction to Cultural Anthropology
or
AN/SO 104 Global Human Issues

Philosophy - three hours

18 of these hours (6 in history, 3 in political science-economics-or geography, 3 in sociology, 3 in anthropology, and 3 in philosophy) are double-counted as part of the GER's. 36 credits (24 in history, 12 in social sciences) are in addition to the GER's.

Only six hours of 100 level and six hours of 200 level courses may be applied toward a history major or minor.

No more than three hours from the following may be used toward the 30 hours required for a history major:
HI 492, 498, 499.

History (Teacher of Social Studies Grades 9-12)

Required courses:
HI 111 Western Civilization to 1715
or
HI 121 The Ancient World
HI 112 Western Civilization since 1715
or
HI 124 The World since 1815
HI 221 U.S. History and Constitutions to 1865
HI 222 U.S. History and Constitutions since 1865

One course from each of the following areas:

- Area III Ancient Medieval
- Area IV Early Modern--Modern
- Area V Non-US, Non-Western, National Histories
- Area VI U.S. History to 1877
- Area VII U.S. History since 1877
- Area VIII U.S. History-Topical

Cognate Courses:

Political Science - six hours
PO 172 American Government: The Federal System
PO 277 American Government: State and Local Government
PO 260 International Relations

Economics - three hours
EC 102 Principles of Microeconomics

Geography - six hours
GS 110 Human Geography
and
Any regional geography

Sociology/Anthropology - six hours
SO 102 Introduction to Sociology
and either
AN 100 Introduction to Cultural Anthropology
or
AN/SO 104 Global Human Issues

Philosophy - three hours

18 of these hours (6 in history, 3 in political science-economics-or geography, 3 in sociology, 3 in anthropology, and 3 in philosophy) are double-counted as part of the GER's. 36 credits (24 in history, 12 in social sciences) are in addition to the GER's.

Only six hours of 100 level and six hours of 200 level courses may be applied toward a history major or minor.

No more than three hours from the following may be used toward the 30 hours required for a history major:
HI 492, 498, 499.

NOTE: Students must minor in secondary education.

Community History Concentration

Required courses:
HI 111 Western Civilization to 1715
or
HI 121 The Ancient World
HI 112 Western Civilization since 1715
or
HI 124 The World since 1815
HI 221 U.S. History and Constitutions to 1865
HI 222 U.S. History and Constitutions since 1865

Three courses (nine hours) from the following areas:

- Area III Ancient Medieval
- Area IV Early Modern--Modern
- Area V Non-US, Non-Western, National Histories

Three courses (nine hours) in upper level U.S. History. Students will select courses from the following:

- HI 341 United States History:
The Colonial Period 1607-1763
- HI 440 Topics in U.S. History
- HI 443 American Immigration and Ethnicity
- HI 445 American Labor History
- HI 447 History of the American City
- HI 455 New England Textile Communities:
Social and Economic History
- HI 461 History of Massachusetts
- HI 492 History Seminar
- HI 498 Internship in History
- HI 499 Directed Study

Students are required to take a combined minimum of six hours in internship and directed study. The maximum combined total of hours in internship and directed study is nine hours (not all nine hours may be taken exclusively in either internship or directed study).

Among those with whom internship arrangements have been made are:

- The John F. Kennedy Presidential Library in
Dorchester
- State House
- Plimoth Plantation in Plymouth
- The Thornton W. Burgess Society in Sandwich
on Cape Cod
- Old Colony Historical Society in Taunton
- Newport Historical Association
- The Whaling Museum in New Bedford
- Quincy Historical Association

Military History Concentration

Required courses:

- HI 111 Western Civilization to 1715
or
- HI 121 The Ancient World
- HI 112 Western Civilization since 1715
or
- HI 124 The World since 1815
- HI 221 U.S. History and Constitutions to 1865
- HI 222 U.S. History and Constitutions since 1865

Three courses (nine hours) from the following (no more than two courses - six hours - may deal with the late 20th century):

- HI 354 U.S. Foreign Relations Since 1900
- HI 343 The American Revolution
- HI 349 U.S. History: The Civil War
- HI 363 America at War in the 20th Century
- HI 440 Topics in U.S. History: Vietnam
- HI 492 History Seminar
- HI 498 Internship in History
- HI 499 Directed Study

Three courses (nine hours) from among the following:

- HI 329 Twentieth Century Europe
- HI 426 The French Revolution and Napoleonic Era
- HI 435 World War II
- HI 400 Topics in Non-U.S. History: Crusades
- HI 498 Internship in History
- HI 499 Directed Study

No more than three hours from the following may be used toward the 30 hours required for a History major:
HI 492, 498, 499.

Double Major With Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in History and Elementary Education, Early Childhood Education or Special Education for certification purposes. Appropriate advising materials with suggested sequences are available.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific teacher certification and program requirements.

School of Arts and Sciences

History Minor

Required courses:

HI 111 Western Civilization to 1715

or

HI 121 The Ancient World

HI 112 Western Civilization since 1715

or

HI 124 The World since 1815

HI 221 U.S. History and Constitutions to 1865

HI 222 U.S. History and Constitutions since 1865

One course (three hours) from the 300-400 upper level courses. Students may select from the following areas:

Area III Ancient Medieval

Area IV Early Modern- Modern

Area V Non-US, Non-Western, National Histories

One course (three hours) from the 300-400 upper level courses. Students may select from any one of the following areas:

Area VI U.S. History to 1877

Area VII U.S. History since 1877

Area VIII U.S. History-Topical

Only six hours of 100 level and six hours of 200 level courses may be applied toward a history major or minor.

Graduate Programs

Master of Arts

The Department of History offers a program leading to the degree of Master of Arts in History which is designed to prepare qualified students for research, further graduate study, and teaching. Students are responsible for checking the details of the program in the pamphlet, *Graduate Degree Requirements*, issued by the Department of History.

An undergraduate major in History is normally required for admission to the M.A. program. Prerequisite advanced courses for candidates who do not have such an undergraduate major are set on an individual basis by the Graduate Committee of the Department of History. Applicants must have an interview with the coordinator of the program and the chairperson of the department. No application will be considered unless this requirement has been met.

A thesis is optional in the Master of Arts program in History. When a candidate chooses to write a thesis, a thesis committee will be set up including the thesis adviser and two other members of the Department of History, chosen by the Graduate program coordinator in consultation with the Graduate Committee of the Department, the student's adviser, and the student. The candidate must be familiar with information on writing a thesis that is included in *The Master's Thesis*, available from the Office of the Graduate School, and the pamphlet, *Graduate Degree Requirements*, issued by the Department of History. After completion of 25 hours of graduate credit, candidates working on a thesis must register each fall and spring semester for three hours of thesis credit (HI 502) until the thesis is completed.

Candidates who do not choose to write a thesis must complete course work in addition to the minimum credits required for the degree.

All candidates accepted must enroll under the direction of the adviser in GP 501, Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. Candidates for the Master of Arts degree in History are required to take HI 501 Seminar in Historical Methodology or HI 493 Study and Writing of History or a directed study in historical methodology as soon as possible after being accepted in the program. Other courses should be chosen with consideration given to the distribution by group and area listed below. The following courses may not be taken for graduate credit:

All 100 and 200 courses
HI 498 Internship in History
HI 499 Directed Study in History

Not earlier than the last term of course work, the candidate will take a comprehensive examination in the areas chosen. These examinations are given in the fall and spring only. The comprehensive examinations are prepared and administered, and their correction is supervised, by the Graduate Committee of the Department of History.

Master of Arts in Teaching

The Department of History offers a program leading to the degree of Master of Arts in Teaching in History, designed to meet the needs of certified and prospective high school teachers in methodology and subject matter and to prepare them for further graduate study. Students are responsible for checking the details of the program in the pamphlet, *Graduate Degree Requirements*, issued by the Department of History.

Liberal arts graduates seeking high school teacher certification through the M.A.T. program should consult the *Department of Secondary Education and Professional Programs* section of this catalog for detailed information about certification requirements.

An undergraduate major in History is normally required for admission to the M.A.T. program. Prerequisite advanced courses for candidates who do not have such an undergraduate major are set on an individual basis by the Graduate Committee of the Department of History. The degree requirements include a minimum of 12 credits in professional study and a minimum of 18 graduate credits in history. All candidates accepted must enroll under the direction of the adviser in GP 501, *Graduate Program Planning*, which is described under "Graduate Advisers and Program Planning" in the

Graduate School section of this catalog. Even though a thesis is optional, candidates for the MAT in History are required to take HI 501 or HI 493 or a directed study in historical methodology as soon as possible after being accepted in the program. Other courses should be chosen with consideration given to the distribution by group and area listed below. The following courses may not be taken for graduate credit:

All 100 and 200 courses
HI 498 Internship in History
HI 499 Directed Study in History

Not earlier than the last term of course work the candidate will take a comprehensive examination in the areas chosen. These examinations are given in the fall and spring only. The comprehensive examinations are prepared and administered, and their correction is supervised, by the Graduate Committee of the Department of History.

Master of Arts in Teaching in Social Sciences

The Department of History plays a major role in the MAT program in Social Sciences. The concentration involves work in four fields: economics, geography, history, and political science. For details candidates should consult the coordinator of the program and the pamphlet, *Graduate Degree Requirements*, issued by the Department of History.

Liberal arts graduates seeking high school teacher certification through the MAT program should consult the *Department of Secondary Education and Professional Programs* section of this catalog for detailed information about certification requirements.

Certificate of Advanced Graduate Study (CAGS) Concentration for History/Social Science Teachers

The Department of History in conjunction with the Department of Psychology and the Department of Sociology and Anthropology have developed a concentration for history/social studies teachers in the CAGS in Behavioral Sciences program. This concentration is designed primarily for students with a history background at the master's degree level and would provide for additional specialization in history as well as appropriate interdisciplinary study in the behavioral sciences.

School of Arts and Sciences

Program Requirements

Thirty-three graduate credits (plus the 1-credit academic advising course), at least 12 of which would be in history and 12 in behavioral sciences; the remainder to be electives between the two disciplines. A minimum of 15 hours would be required to be taken through 500-level courses.

Specific Course Requirements

Either ED 412 Strategies of Teaching in the High School/Social Studies, or BH 560 Curriculum Materials in the Behavioral Sciences; BH 599 CAGS Seminar in Behavioral Sciences; HI 501 Seminar in Historical Methodology. BH 599 will be the culminating course, and students will be required to present and defend orally a project/paper developed as part of this seminar, before the combined graduate committees.

Admission

Students must possess an M.A., M.S., M.S.W., or M.Ed., with a minimum of 54 credit hours in behavioral sciences and/or history. Some or all of this credit can be from undergraduate courses.

For further information contact the chairperson of the Department of History or the Graduate School.

Graduate Programs by Area

Each student entering a graduate program in history will choose, in consultation with the adviser, one of the four groups of historical study listed below as his major. Two areas must be chosen within the major group and one additional area from the remaining groups. Students majoring in group II, III, or IV must choose the additional area in the History of the United States. These areas must be declared on the departmental form upon entering the program. Students may not change the areas after the application for the comprehensive examination has been filed.

Candidates are expected to know bibliography in each field. Reading lists are available from the Department of History.

The graduate program in history is divided into four major groups:

- I. United States and Canada
- II. Europe
- III. Latin America
- IV. Asia and Africa

Group I: United States and Canada Areas:

1. Chronological period, 1607-1787
2. Chronological period, 1787-1877
3. Chronological period, 1877 to present
4. Canada

Group II: Europe Areas:

1. Ancient Greece and Rome
2. Middle Ages and Renaissance
3. Early Modern and Revolutionary Europe
4. 19th and 20th Century Europe
5. Russia and Eastern Europe

Group III: Latin America Areas:

1. Pre-Columbian and Colonial Period
2. National Period
3. Brazil

Group IV: Asia and Africa Areas:

1. Ancient Middle East
2. Middle East since Mohammed
3. Colonial Africa
4. Modern Africa

Course Offerings*

Area I - 100 Level

- HI 111 Western Civilization to 1715
- HI 112 Western Civilization since 1715
- HI 121 The Ancient World
- †HI 122 World Civilization II: Medieval
- †HI 123 World Civilization III: Early Modern
- HI 124 The World since 1815

Area II - 200 Level

- HI 221 U.S. History and Constitutions to 1865
- HI 222 U.S. History and Constitutions since 1865

Area III - Ancient and Medieval

- HI 300 The Ancient World: The Near East
- HI 303 Ancient Greece and the Hellenistic Age
- HI 310 Ancient Rome
- HI 312 Rise of Early Christianity
- HI 315 Europe in the Middle Ages
- HI 316 Renaissance and Reformation
- HI 400 Topics in Non-U.S. History
- HI 403 Mystery Religions
- HI 416 Jews and Christians in the Ancient Roman World
- HI 492 History Seminar
- HI 498 Internship
- HI 499 Directed Study

Area IV - Early Modern and Modern

- HI 321 British History since 1603
- HI 324 British Empire and Commonwealth since 1815
- HI 326 Louis XIV and Absolutism
- HI 328 Nineteenth Century Europe
- HI 329 Twentieth Century Europe
- HI 330 East-Central Europe since 1918
- HI 400 Topics in Non-U.S. History
- HI 423 Intellectual History of Modern Europe
- HI 424 Modern European Imperialism
- HI 426 French Revolution and Napoleon
- HI 435 World War II
- HI 492 History Seminar
- HI 498 Internship
- HI 499 Directed Study

Area V - Non-U.S., Non-Western, and National Histories

- HI 331 History of the Middle East
- HI 332 The Arab-Israeli Conflict
- †HI 333 Modern France
- HI 334 Modern Russia
- HI 335 History of Portugal
- HI 336 Modern Germany
- HI 375 Canada to Confederation
- HI 376 Canada since Confederation
- †HI 380 Latin America: The Colonial Period
- †HI 381 Latin America: The National Period
- †HI 384 History of China
- †HI 385 History of Japan
- HI 386 South Asia: The Modern Period
- HI 390 Africa since 1800
- HI 400 Topics in Non-U.S. History
- †HI 433 China Under Communism
- HI 439 History of USSR
- HI 492 History Seminar
- HI 498 Internship
- HI 499 Directed Study

Area VI - U.S. History to 1877

- HI 341 United States History:
The Colonial Period 1607-1763
- HI 343 United States History:
The American Revolution
- HI 345 United States History:
The Early National Period
- HI 347 Jacksonian Democracy and
the Coming of the Civil War
- HI 349 United States History: The Civil War
- HI 351 United States History: 1865-1900
- HI 352 The American South
- HI 353 United States Foreign Relations to 1900
- HI 356 Social and Intellectual History of the U.S. to 1870
- HI 440 Topics in U.S. History
- HI 492 History Seminar
- HI 498 Internship
- HI 499 Directed Study

Area VII - U.S. History since 1877

- HI 354 United States Foreign Relations since 1900
- †HI 357 Social and Intellectual History of
the U.S. 1870-1914
- †HI 358 Social and Intellectual History of
the U.S. since 1914
- HI 359 United States History: Progressive Era
- HI 361 United States History from World War I
- HI 363 America at War in the 20th Century
- HI 364 Topics in Recent American History
- HI 365 American Economic History
- HI 366 Constitutional History of the U.S.
- HI 440 Topics in U.S. History
- HI 461 History of Massachusetts
- HI 492 History Seminar
- HI 498 Internship
- HI 499 Directed Study

* See pages 75-76 for general information regarding course offerings.

† See Other Approved Courses after HI 499.

School of Arts and Sciences

Area VIII - Topical - U.S.

- HI 440 Topics in U.S. History
- HI 441 History of American Indians
- HI 443 American Immigration and Ethnicity
- HI 445 American Labor History
- HI 447 History of the American City
- HI 449 Afro-American History
- HI 451 Women in American History
- †HI 453 The American West
- HI 455 New England Textile Communities
- HI 457 American Environmental History
- HI 459 Sport in American Life
- †HI 463 American Political History
- HI 464 Contemporary Affairs
- HI 475 History of Canadian-American Relations
- HI 491 Historiography
- HI 492 History Seminar
- HI 493 Study and Writing of History
- HI 497 Historical Museum Management
- HI 498 Internship
- HI 499 Directed Study

Area IX - Limited to All College and Departmental Honors Students

- HI 135 Freshman Honors Colloquium
- HI 136 Freshman Honors Colloquium
- HI 286 Sophomore Honors Colloquium
- HI 287 Sophomore Honors Colloquium
- HI 338 Honors Tutorial—Fall Semester
- HI 339 Honors Tutorial—Spring Semester
- HI 485 Honors Thesis

The object of the 100-level courses is to give a broad introduction to history at the college level. They should be taken in sequence. Courses that overlap in time periods may not be both taken for credit. Possible sequences include:

- HI 111-112
- HI 121-122-123-124
- HI 111-123-124
- HI 121-122-112

HI 111 Western Civilization to 1715 (3 crs.)

The course surveys the major developments from the genesis of Western civilization to the establishment of absolute monarchy. These developments include the Near Eastern, the Graeco-Roman, and the Judeo-Christian traditions of our civilization. Satisfies the GER in History. *Either semester*

HI 112 Western Civilization since 1715 (3 crs.)

The course surveys the major developments in Western civilization from the establishment of absolute monarchy to the present. These developments include the evolution of political, economic, social and intellectual aspects of the modern world. Satisfies the GER in History. *Either semester*

HI 121 The Ancient World (3 crs.)

This course presents a global view of ancient history with emphasis on Western civilization. It covers prehistoric humans and the various ancient civilizations to the decline of the Roman Empire in the West. Satisfies the GER in History. *Either semester*

HI 124 The World since 1815 (3 crs.)

This course presents a global view of modern history with emphasis on Western civilization. It covers the zenith of European power and nation-building in Africa, Asia and Latin America. Satisfies the GER in History. *Either semester*

HI 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman Honors Colloquia in History allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (Prerequisite: consent of the instructor) HI 135 fall semester, HI 136 spring semester

HI 221 United States History and Constitutions to 1865 (3 crs.)

This course examines the development of the nation from the age of exploration to the end of the Civil War. It emphasizes the economic, political, intellectual and social maturing of the United States. Satisfies the GER in History. *Either semester*

HI 222 United States History and Constitutions since 1865 (3 crs.)

This course continues the study begun in HI 221 down to the present. It emphasizes the growth of America as an industrial and world power and the increasing role of government in American life. Satisfies the GER in History. *Either semester*

HI 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquia in History allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (Prerequisite: consent of the instructor) HI 286 fall semester, HI 287 spring semester

† See other approved courses.

300 and 400-level courses in history are designed primarily for juniors and seniors. As a minimum preparation, those taking upper-level courses in European, Asian, African, and Latin American history must have completed 3 credits in either Western Civilization or World Civilization. Those taking upper-level courses in U.S. or Canadian history must have completed either HI 221 or HI 222. Exceptions to these requirements must be approved by the department.

HI 300 The Ancient World: Near East (3 crs.)

From prehistoric times through the Persian Empire. *Offered alternate years*

HI 303 Ancient Greece and the Hellenistic Age (3 crs.)

An historical survey of Ancient Greece and a comprehensive study of the cultural contributions of the Greeks to western civilization. *Offered alternate years*

HI 310 The Ancient World: Rome (3 crs.)

From its beginnings to the barbarian invasions. *Offered alternate years*

HI 312 Rise of Early Christianity (3 crs.)

This course traces the development of Christian beginnings from the birth of Christ to the Council of Nicaea in 325 A.D. It intends to examine the cultural, social, intellectual, political and religious climate in the Roman Empire out of which Christianity sprang, the problems the early Christians encountered, and the Christian reaction to these problems. (*Prerequisite: HI 111*)

HI 315 Europe in the Middle Ages (3 crs.)

From the fall of Rome to the Renaissance. *Offered once in three years*

HI 316 The Renaissance and the Reformation (3 crs.)

Western Europe from the decline of feudal institutions to the emergence of the modern state system, with emphasis on cultural and intellectual affairs. *Offered once in three years*

HI 321 British History since 1603 (3 crs.)

England and her empire to 1815 with stress on parallel developments in American history, including economic and social factors. *Offered alternate years*

HI 324 British Empire and Commonwealth since 1815 (3 crs.)

Political development to the present with emphasis on the rise and fall of the Second Empire. *Spring semester*

HI 326 Louis XIV and the Age of Absolutism (3 crs.)

A history of Europe from the end of the Thirty Years' War to the French Revolution with emphasis on the political, social, scientific, religious, literary, and artistic achievements during the period. *Offered once in three years*

HI 328 Nineteenth Century Europe (3 crs.)

From the Napoleonic era to the eve of the First World War. *Fall semester*

HI 329 Twentieth Century Europe (3 crs.)

Particular focus on backgrounds, development, and effects of the two world wars. *Spring semester*

HI 330 History of East-Central Europe since 1918 (3 crs.)

The political, social, economic, cultural, and intellectual history of Austria, Hungary, Czechoslovakia, and Poland during the interwar period--and that of the Socialist Republics (Hungary, Czechoslovakia, Poland, and East Germany) from the Second World War to the present. *Offered once in three years*

HI 331 History of the Middle East (3 crs.)

From Mohammed to the present: the Arab Empire, the Ottoman Empire, and the roots of the Arab-Israeli dilemma. *Offered alternate years*

HI 332 The Arab-Israeli Conflict (3 crs.)

Zionism and Arab nationalism from the nineteenth century to the present with emphasis on the root causes of the present conflict. *Spring semester*

HI 334 Modern Russia to 1917 (3 crs.)

Political, social, and economic factors in the history of Russia from the end of the fifteenth century to the Revolution. *Offered alternate years*

HI 336 Modern German History (3 crs.)

From the reign of Frederick the Great to the end of World War II. *Offered once in three years*

HI 338-339 Honors Tutorial (3 crs. each semester)

Special topics in history. Open to All-College and departmental honors students. Three hourly meetings weekly. (*Prerequisite: consent of the department*) *HI 338 fall semester, HI 339 spring semester*

HI 341 United States History: The Colonial Period 1607-1763 (3 crs.)

The settlement and growth of the English colonies of America; England's colonial policies; economic and institutional development in the provincial period; the wars with the Indians, and the rivalry with the French in America. *Offered alternate years*

HI 343 United States History: The American Revolution 1763-1787 (3 crs.)

Background and causes of the American Revolution, the military, social, political, and diplomatic aspects of the Revolution. The government under the Articles of Confederation, and the problems engendered by the attainment of political independence. *Offered alternate years*

HI 345 United States History: The Early National Period (3 crs.)

United States History from the establishment of the Republic to the election of Andrew Jackson.

HI 349 United States History: The Civil War (3 crs.)

Background and causes of the Civil War, the military and naval aspects. Civil War music, art, and literature, diplomacy of the Civil War, the home front in the war, the plans for reconstruction, and military reconstruction. *Fall semester*

School of Arts and Sciences

HI 352 The American South (3 crs.)

Sectionalism; its causes and consequences; factors which made the South distinctive; emphasis on race relations, the Civil War and Reconstruction, agrarianism, industrialization. *Spring semester*

HI 353 United States Foreign Relations to 1900 (3 crs.)

From the American Revolution to 1900. *Fall semester*

HI 354 United States Foreign Relations since 1900 (3 crs.)

From 1900 to present. *Spring semester*

HI 356 Social and Intellectual History of the U.S. to 1870 (3 crs.)

Economic, social, and cultural development to the end of the Civil War. *Offered alternate years*

HI 357 Social and Intellectual History of the United States 1870-1914 (3 crs.)

The economic, social, and cultural development from 1870 to the eve of the First World War, with emphasis on the transformation from an agricultural to an industrial society. *Offered alternate years*

HI 358 Social and Intellectual History of the U.S. since 1914 (3 crs.)

Economic, social, and cultural developments from 1914, with emphasis on the transformation of American life through such forces as technology, population trends, and the mass-production and mass-consumption economy. *Offered alternate years*

HI 359 United States History: Progressive Era (3 crs.)

The rise of the Progressive movement in American history to the early 1920's as reflected in politics, government, and the social and intellectual life of the era. *Offered alternate years*

HI 361 United States History from World War I (3 crs.)

Development of the modern America through the isolationism and boom of the 1920's, the Great Depression, the New Deal, World War II, and the role of the United States in the post-war world. *Spring semester*

HI 363 America at War in the 20th Century (3 crs.)

An examination of America's four wars in the context of diplomacy, strategy, politics and economic and social change. *(Prerequisite: HI 221 or HI 222)*

HI 375 Canadian History to Confederation (3 crs.)

The land, the native peoples, exploration, patterns of settlement of the French through the Conquest to the development of English institutions. *Fall semester*

HI 376 Canadian History since Confederation (3 crs.)

The evolution of an independent Canada from the time of the Confederation. *Spring semester*

HI 380 Latin America: The Colonial Period (3 crs.)

Indigenous peoples of the area; exploration and conquest; institutional development of the empire to the revolts against Spain.

HI 381 Latin America: The National Period (3 crs.)

From the revolutions against Spain to the present.

HI 384 History of China (3 crs.)

From prehistoric times to the present with particular emphasis on intellectual and cultural development.

HI 385 History of Japan (3 crs.)

From prehistoric times to the present with emphasis on the development of social, political and economic institutions.

HI 386 South Asia: The Modern Period (3 crs.)

Emphasis on colonialism and nationalism in the Indian subcontinent and Vietnam. *Fall semester*

HI 390 Africa since 1800 (3 crs.)

The impact of Islamic and European cultures on the peoples of Africa; creation of colonial empires. *Offered once in three years*

HI 400 Topics in Non-U.S. History (3 crs.)

Varied topics such as the Crusades; Ancient Egypt. *Either semester*

HI 403 Mystery Religions (3 crs.)

The course will examine the survival of Greek religion in the empire of Alexander the Great and his successors, and the interaction of the Greek religion with the religions of the Ancient Near East under the new conditions and circumstances created by Alexander's conquests. *Offered alternate years*

HI 416 Jews and Christians in the Ancient Roman World (3 crs.)

The history of the Jews and Christians with emphasis on the relationships with the Roman authorities and people. *Offered alternate years*

HI 423 Intellectual History of Modern Europe (3 crs.)

From the Renaissance to the present. *Offered once in three years*

HI 424 Modern European Imperialism (3 crs.)

Africa and Asia considered as contrasting phases of European expansion in the nineteenth and twentieth centuries. *Offered once in three years*

HI 426 The French Revolution and the Napoleonic Era (3 crs.)

France from the Old Regime to the end of the First Empire. *Offered once in three years*

HI 433 China Under Communism (3 crs.)

The origins of the Chinese Communist Party and the political, social, economic, and intellectual changes fostered by the party since 1949.

HI 435 World War II (3 crs.)

A study of the global conflict with emphasis on military, diplomatic, and political events. *Fall semester*

HI 439 History of the U.S.S.R. (3 crs.)

The political, social, intellectual, and diplomatic history of the Soviet Union. *Spring semester*

HI 440 Topics in U.S. History (3 crs.)

Varied topics such as the French in New England; History of Boston; American assassinations, the Vietnam War; Abraham Lincoln. *Either semester*

HI 441 History of American Indians (3 crs.)

The history of American Indians to the twentieth century, emphasizing the role of economic, political, and military conflict with the people and government of the United States. *Fall semester*

HI 443 American Immigration and Ethnicity (3 crs.)

Patterns of migration to the United States with particular emphasis on the nineteenth and twentieth centuries. *Fall semester*

HI 445 American Labor History (3 crs.)

The pre-industry and industrial periods. Emphasis on the reciprocal relations of workingmen, negroes, immigrants, urbanization, and industrialization. *Spring semester*

HI 447 History of the American City (3 crs.)

Political, architectural, economic, social, cultural, and population factors in the growth and development of American cities since colonial times. *Offered alternate years*

HI 449 Afro-American History (3 crs.)

From the colonial period through the present.

HI 451 Women in American History (3 crs.)

A history of American women from the colonial period to the present time. *Offered alternate years*

HI 455 New England Textile Communities: Social and Economic History (3 crs.)

Social history emphasizing economic, ethnic, labor, political and religious factors during a period when the New England region achieved ascendancy as the nation's foremost cotton textile area. *Offered alternate years*

HI 457 American Environmental History (3 crs.)

Man's attitude toward, interaction with, and adaptations to the physical environment of the United States. *Offered alternate years*

HI 461 History of Massachusetts (3 crs.)

From the days of the Pilgrims and Puritans to the present. In the modern period, emphasis is on social, economic and constitutional history. *Offered once in three years*

HI 475 History of Canadian-American Relations (3 crs.)

An analysis of the Canadian efforts to remain friendly with the giant to the south while protecting its political, economic and cultural integrity. *Offered once in three years*

HI 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the Departmental Honors Committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Departmental Honors Committee. *Either semester*

HI 491 Historiography (3 crs.)

Writings of major historians; evaluation through professional journals and book reviews. Enrollment limited to fifteen. Students are expected to elect HI 398. *(Prerequisite: consent of the department chairperson and the instructor) Fall semester*

HI 492 History Seminar (3 crs.)

Each senior will elect a seminar. A research paper is required. The number of students in each is limited. *(Prerequisite: consent of the department chairperson and the instructor) Spring semester*

HI 493 Study and Writing of History (3 crs.)

The techniques of historical research and preparation of papers requiring such techniques; analysis and evaluation of source materials. *(Prerequisite: consent of the instructor) Spring semester*

HI 497 Historical Museums Management (3 crs.)

Critically assesses the role and effectiveness of museums in the public's awareness of American history.

HI 498 Internship in History (3-6 crs.)

Intended to expose student participants to historical artifacts and primary source materials. Host agencies may include museums and public and private historical organizations. *(Prerequisite: consent of the department; formal application required) Either semester*

HI 499 Directed Study in History (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits or with an internship program—combined credit maximum, 6. *(Prerequisite: consent of the department; formal application required) Either semester*

Other Approved Courses:

HI 122 World Civilization II: Medieval

HI 123 World Civilization III: Early Modern

HI 333 Modern France

HI 335 History of Portugal

HI 347 Jacksonian Democracy and the Coming of the Civil War

HI 351 United States History: 1865-1900

HI 364 Topics in Recent American History

HI 380 Spanish America: The Colonial Period

HI 365 American Economic History

HI 366 Constitutional History of the United States

HI 381 Spanish America: The National Period

HI 453 The American West

HI 463 American Political History

HI 464 Contemporary Affairs

School of Arts and Sciences

HI 501 Seminar in Historical Methodology (3 crs.)

The basic methods of historical research and historical writing and the proper use of primary and secondary sources, bibliography, documentation, and annotation. (*Prerequisite: acceptance in a master's degree program at Bridgewater State College*)

HI 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

HI 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

HI 505 History of the American Sciences (3 crs.)

The role of science, leading American scientists, and the formation of major scientific organizations and government scientific agencies in American history.

HI 521 Pilgrim Heritage Seminar (3 crs.)

The Pilgrims in their economic, social, and religious setting. Admission only with the consent of the instructor.

HI 540 Topical Seminar: U.S. and Canada (3 crs.)

This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the course offering brochure. Limited enrollment. (*Prerequisite: consent of the instructor*)

HI 550 Topical Seminar: Europe (3 crs.)

This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the course offering brochure. Limited enrollment. (*Prerequisite: Two appropriate European history courses and permission of the instructor*)

HI 560 Topical Seminar: Latin America (3 crs.)

This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the course offering brochure. Limited enrollment. (*Prerequisite: HI 333 and HI 334 or equivalents*)

HI 570 Topical Seminar: Africa (3 crs.)

This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the course offering brochure. Limited enrollment. (*Prerequisite: HI 329 or equivalent*)

Other Approved Courses:

The following courses also carry credit in history:

- HI 505 History of American Sciences
- ID 200 Introduction to Canadian Studies
- ID 211 History and Literature of Western Civilization I
- ID 220 Introduction to American Studies
- ID 420 American Studies Seminar
- SS 300 Geography and History of Mexico



Department of Management Science and Aviation Science

Faculty

Chairperson: Professor Craig Cowles

Coordinator, Aviation

Science Program: Professor Frank Sterrett

Professors: Saul Auslander, Jon Bryan, Carleton Donchess, Mercer Fellouris, Sylvia Keyes, Kathleen Sevigny, Fred Sheppard, Harold Silverman

Associate

Professors: William Anneseley, Helene Fine, Paul Maxwell, Joseph Stanford

Assistant

Professors: Edgar Canty

The Department of Management Science and Aviation Science offers undergraduate majors in Management Science and Aviation Science with a number of available concentrations. Majors in Management Science may concentrate in General Management, Environmental and Energy Resources Management, Finance, Accounting, Information Systems Management, Marketing Management, and Transportation Management. Majors in Aviation Science may concentrate in either Flight Training or Aviation Management. The Department offers minors in Management Science and Aviation Science.

The Department of Management Science and Aviation Science cooperates with the Department of Speech Communication, Theatre Arts and Communication Disorders in offering an interdisciplinary minor in

Public Relations. In addition, an interdisciplinary minor in Health Resources Management is offered in conjunction with the Department of Movement Arts, Health Promotion and Leisure Studies. For further information concerning the interdisciplinary minors, please see the *Multidisciplinary and Pre-Professional Programs* section of this catalog.

The department maintains a close liaison with the aviation industry and the business community of Massachusetts.

Management Science

The Management Science major is designed to educate students for successful careers in business and management. The program provides general education, other liberal arts courses, and specific management education for students with career interests in business, transportation, energy and environmental resources fields, and in finance and accounting.

Because the major is conducted within a strong liberal arts framework, students are encouraged to understand how business decisions relate to society—culturally, economically, ethically, and socially—while developing the skills and knowledge which will enable them to assume management responsibilities.

Students who enroll in the Management program may gain experience through internships that provide practical, on-the-job training opportunities. These valuable learning experiences, coupled with the college's development as a regional resource for business and industry, offer students significant contact with business and management leaders.

School of Arts and Sciences

General Management Concentration

AC 240 Accounting I
AC 241 Accounting II
AC 350 Managerial Accounting I
MG 130 Principles of Management
MG 140 Human Resources Management
MG 200 Marketing Principles
MG 305 Business Law I
MG 360 Business Data Processing
MG 370 Operations Management
MG 385 Managerial Finance
MG 490 Management Seminar
EC 101 Principles of Microeconomics
EC 102 Principles of Macroeconomics
MA 141-142 Elements of Calculus I-II
MA 110 Elementary Statistics I
MA 318 Quantitative Methods for Management I
CS 105 Computers and Their Applications: An Introduction

Choose one:

Operations Option

MG 340 Labor Relations
MG 470 Materials Management
MG 475 Statistical Process Control

Human Resources Option

PY 313 Psychology of Organizations
MG 340 Labor Relations
MG 375 Personnel Development

Energy and Environmental Resources Management Concentration

AC 240 Accounting I
AC 241 Accounting II
AC 350 Managerial Accounting I
MG 130 Principles of Management
MG 140 Human Resources Management
MG 200 Marketing Principles
MG 305 Business Law I
MG 360 Business Data Processing
MG 385 Managerial Finance
MG 490 Management Seminar
EC 101 Principles of Microeconomics
EC 102 Principles of Macroeconomics
MA 141-142 Elements of Calculus I-II
MA 110 Elementary Statistics I
ES 100 Physical Geology
ES 194 Environmental Geology
ES 240 Hydrology

ES 464 Economic Geology I
GE 100 Physical Geography
GE 216 Cartography
GE 217 Air Photo Interpretation-Remote Sensing
GE 307 Management and Preservation of Natural Environment
GE 311 Energy and the Environment
GE 312 Solar Energy
GE 361 Geography of Environmental Problems
CH 131-132 General Chemistry I-II
CS 105 Computers and Their Applications: An Introduction
One CS programming course.

Accounting Concentration

AC 240 Principles of Accounting I
AC 241 Principles of Accounting II
AC 330 Cost Accounting
AC 340 Intermediate Accounting I
AC 341 Intermediate Accounting II
AC 345 Auditing
AC 360 Advanced Accounting I
AC 492 Accounting Theory
AC 370 Accounting Information Systems
MG 130 Principles of Management
MG 140 Human Resources Management
MG 200 Marketing Principles
MG 305 Business Law I
MG 306 Business Law II
MG 365 Federal Income Taxation I
MG 385 Managerial Finance
MG 490 Management Seminar
EC 101 Principles of Microeconomics
EC 102 Principles of Macroeconomics
MA 110 Elementary Statistics I
MA 141 Elements of Calculus I
MA 142 Elements of Calculus II
MA 318 Quantitative Methods for Management
CS 105 Computers and Their Applications: An Introduction

Finance Concentration

AC 240 Principles of Accounting I
AC 241 Principles of Accounting II
AC 350 Managerial Accounting I
EC 101 Principles of Microeconomics
EC 102 Principles of Macroeconomics
EC 315 Money and Banking
MA 110 Elementary Statistics I

Management Science and Aviation Science

MA 141 Elements of Calculus I
 MA 142 Elements of Calculus II
 MA 318 Quantitative Methods for Management
 CS 105 Computers and Their Applications: An Introduction
 MG 130 Principles of Management
 MG 140 Human Resources Management
 MG 200 Marketing Principles
 MG 305 Business Law I
 MG 306 Business Law II
 MG 360 Business Data Processing
 MG 385 Managerial Finance
 MG 386 Capital Budgeting
 MG 390 Investments
 MG 455 International Finance
 MG 465 Options and Futures Market
 MG 476 Insurance and Risk Management
 MG 486 Real Estate Investment and Finance
 MG 490 Management Seminar

Information Systems Management Concentration

AC 240 Accounting I
 AC 241 Accounting II
 AC 350 Managerial Accounting I
 MG 130 Principles of Management
 MG 140 Human Resources Management
 MG 200 Marketing Principles
 MG 305 Business Law I
 MG 360 Business Data Processing
 MG 385 Managerial Finance
 MG 445 Information Systems Management
 MG 450 Problems in Information Systems
 MG 480 Systems Analysis
 MG 490 Management Seminar
 EC 101 Principles of Microeconomics
 EC 102 Principles of Macroeconomics
 MA 141-142 Elements of Calculus I-II
 MA 110 Elementary Statistics I
 MA 318 Quantitative Methods for Management I
 CS 101 Computer Science I
 CS 102 Computer Science II
 CS 210 COBOL Programming I
 CS 211 COBOL Programming II
 CS 410 Database Applications

Marketing Concentration

AC 240 Accounting I
 AC 241 Accounting II
 AC 350 Managerial Accounting I
 MG 130 Principles of Management
 MG 140 Human Resources Management
 MG 200 Marketing Principles
 MG 305 Business Law I
 MG 324 Advertising
 MG 360 Business Data Processing
 MG 385 Managerial Finance
 MG 420 Marketing Research
 MG 430 Sales Management
 MG 490 Management Seminar
 MG 494 Marketing Management and Strategy
 Any one of:
 MG 320 Retail Management
 MG 410 International Marketing and Physical Distribution
 or
 MG 440 Industrial Marketing
 EC 101 Principles of Microeconomics
 EC 102 Principles of Macroeconomics
 MA 141-142 Elements of Calculus I-II
 MA 110 Elementary Statistics I
 MA 318 Quantitative Methods for Management
 CS 105 Computers and Their Applications: An Introduction

School of Arts and Sciences

Transportation Concentration

AC 240 Accounting I
AC 241 Accounting II
AC 350 Managerial Accounting I
MG 130 Principles of Management
MG 140 Human Resources Management
MG 200 Marketing Principles
MG 305 Business Law I
MG 360 Business Data Processing
MG 385 Managerial Finance
MG 490 Management Seminar
EC 101 Principles of Microeconomics
EC 102 Principles of Macroeconomics
MA 141-142 Elements of Calculus I-II
MA 110 Elementary Statistics I
CS 105 Computers and Their Applications: An Introduction
Any one CS programming course
SO 306 Urban Sociology
PO 279 Introduction to Public Administration
PO 376 Municipal Government
GE 216 Cartography
GS 353 Urban Geography
GS 362 Economic Geography
GS 430 Geography of Transportation
ES 100 Physical Geology
or
GE 100 Physical Geography

Management Science Minor

Students from liberal arts and other programs may elect this minor to broaden their background and expand their potential in job related areas of their respective disciplines. The central purpose of this minor is to provide initial exposure to the basic areas of business and the environment of the business world.

Required courses:

AC 240 Accounting I
MG 130 Principles of Management
MG 200 Marketing Principles

Plus three electives from any AC or MG course for which prerequisites can be completed. EC 101 Principles of Microeconomics or EC 102 Principles of Macroeconomics may also be used toward the completion of these three required electives.

Aviation Science

The Aviation Science Program is designed to provide a coordinated program combining liberal arts with concentrations in either *Flight Training* or *Aviation Management*. This major leads to a degree of Bachelor of Science or Bachelor of Arts. Students interested in future positions in industry-related aviation, especially as either pilots or as managers, will benefit from this program. Bridgewater State College is recognized by the Federal Aviation Administration as an Aviation Education Resource Center. Numerous other careers may be realized from either of these concentrations and other options provided by the Aviation Science Program including:

Air Force Reserve Officer Training Corps (ROTC)—is an educational program designed to give men and women the opportunity to become an Air Force officer while completing a bachelor's degree program. The Air Force ROTC program is designed to prepare students to assume positions of increasing responsibility and importance in the Air Force.

In addition, Air Force ROTC full and partial scholarships are available to students who qualify. During the junior and senior years, ROTC cadets are paid monthly stipends. (See the *Multidisciplinary and Pre-Professional Programs* section in this catalog for further information).

Federal Aviation Administration (FAA) Air Way Science Curriculum approval has been awarded to Bridgewater State College. Students who complete this curriculum, along with the requirements for a bachelor's degree in Aviation Science, qualify for preferential status for subsequent employment with the FAA.

Management Science and Aviation Science

Federal Aviation Administration Certification of
Bridgewater State College as a Federal Air Regulation (FAR) Part 141 ground school allows students to complete all required ground school courses at the college as part of the Aviation Science curriculum and at no additional tuition.

Bridgewater State College has been recognized by the Federal Aviation Administration (FAA) to conduct the Airway Science Curriculum Program. Participation in this program provides an advantage to students who plan a career with the FAA. Further, the Bridgewater State College program incorporates single engine and multi-engine flight simulator training into the flight training courses. For complete information on these programs consult with Professor Frank Sterrett, coordinator of the Aviation Science Program.

Flight Training Concentration*

AS 101 Primary Flight I
AS 102 Primary Flight II
AS 103 Primary Flight III
AS 105 Private Pilot Ground School
AS 201 Commercial Flight I
AS 202 Commercial Flight II
AS 203 Commercial Flight III
AS 204 Commercial Flight IV
AS 205 Commercial Flight V
AS 211 Commercial Pilot Ground School
AS 212 Instrument Pilot Ground School
AS 301 Instructional Flight I
AS 302 Instructional Flight II
AS 303 Flight Instructor Ground School
AS 305 Introduction to Aviation Management
AS 306 General Aviation Operations
MG 130 Principles of Management
MG 140 Human Resources Management
MA 141-142 Elements of Calculus I-II
MA 110 Elementary Statistics I
PH 181-182 Elements of Physics I-II
CS 105 Computer and Their Applications: An Introduction
EC 102 Principles of Macroeconomics

**Please note that flight courses involve flight fees.*

Aviation Management Concentration*

AS 101 Primary Flight I
AS 102 Primary Flight II
AS 103 Primary Flight III
AS 105 Private Pilot Ground School
AS 305 Introduction to Aviation Management
AS 306 General Aviation Operations
AS 307 Air Transportation
AS 308 Airline Operations
AS 402 Insurance and Legal Aspects of Business Aviation
AS 407 Aviation Marketing Management
MG 130 Principles of Management
MG 140 Human Resources Management
MG 360 Business Data Processing
MA 141-142 Elements of Calculus I-II
MA 110 Elementary Statistics I
PH 181-182 Elements of Physics I-II
CS 105 Computers and Their Application: An Introduction
EN 201 Technical Writing
One environmental science course
EC 102 Principles of Macroeconomics
AC 240-241 Accounting I-II

**Please note that flight courses involve flight fees.*

School of Arts and Sciences

Aviation Science Minor*

The minor is divided into two options: a *Flight Option* and an *Aviation Management Option*.

Flight Option:

AS 101 Primary Flight I
AS 102 Primary Flight II
AS 103 Primary Flight III
AS 105 Private Pilot Ground School
MG 130 Principles of Management
Plus electives selected from list below. A minor requires a minimum of 18 credit hours.

Aviation Management Option:

AS 305 Introduction to Aviation Management
MG 130 Principles of Management
MG 140 Human Resources Management
plus electives selected from list below. A minor requires a minimum of 18 credit hours.

Electives:

AS 101 Primary Flight I
AS 102 Primary Flight II
AS 103 Primary Flight III
AS 105 Private Pilot Ground School
AS 201 Commercial Flight I
AS 202 Commercial Flight II
AS 203 Commercial Flight III
AS 204 Commercial Flight IV
AS 205 Commercial Flight V
AS 211 Commercial Pilot Ground School
AS 212 Instrument Pilot Ground School
AS 301 Instructional Flight I
AS 302 Instructional Flight II
AS 303 Flight Instructor Ground School
AS 305 Introduction to Aviation Management
AS 306 General Aviation Operations
AS 307 Air Transportation
AS 402 Insurance and Legal Aspects of Business Aviation
AS 407 Aviation Marketing Management
MG 140 Human Resources Management

**Please note that flight courses involve flight fees.*

Flight Training and Ground School:

Students enrolled in the Aviation Science Program must take all flight and flight-related courses through Bridgewater State College. Flight training is provided by cooperating Federal Aviation Administration (FAA) approved flight schools which operate under Federal Aviation Regulation (FAR) Part 141. A list of cooperating flight schools may be obtained from the office of the coordinator of the Aviation Science Program.

Ground School courses are conducted by the college under a FAA approved FAR Part 141 ground school as is the flight simulator training which is required of all Aviation Science majors as a part of the flight training courses.

Physical Examinations

Students seeking admission to the Flight Training Concentration must pass a Class II or better FAA physical examination; a Class III FAA physical is required for the Aviation Management Concentration or any other program involving flight courses. A copy of the certification for the appropriate flight physical must be on file with the Aviation Science Coordinator BEFORE FLIGHT TRAINING BEGINS.

Academic Credit for Flight Training

The following procedures for granting academic credit for flight and flight-related ground school training for both incoming freshman students and transfer students are in accord with pertinent college policies and are designed to promote academic quality and to maximize safety for the participants in the Aviation Science Program. All students requesting academic credit from Bridgewater State College for flight and flight-related ground school training are subject to these provisions. Credit for all other course work will be considered as specified in the college catalog under the sections concerning *Transfer Admissions* and *Transfer of Credit After Admission*.

Management Science and Aviation Science

Entering Freshmen and Transfer Students

Freshmen or transfer students entering Bridgewater State College may request up to eighteen (18) credits for previous work in flight and flight-related ground school training under the following provisions:

1. To obtain credit for flight training, the student must:
(a) provide valid documentation* of the flight training concerned, (b) hold a current, appropriate flight physical certificate, and (c) pass a flight proficiency test conducted by an Aviation Science Program flight instructor. (Additional flight training may be required if a student has difficulty passing the flight proficiency test.) All costs for the flight proficiency test (and any additional flight training) will be borne by the applicant.
2. Credit for training in FAA certified ground schools may be obtained by providing valid documentation* of the training concerned.

*Valid documentation includes pertinent log books and other certificates, licenses, and verification of the training from the school(s) concerned. This verification must be in the form of a statement which identifies the school, describes the curriculum under which the training was taken, and specifies the number of class hours involved. The statement must be signed by the chief flight instructor of the school. (The standard ratio for relating hours to academic credit is 18 class hours of flight training for one academic credit.) Full credit will be granted for courses from flight schools operating under Federal Aviation Regulation (FAR) Part 141 curricula, and half credit for training from schools utilizing the FAR Part 61 program.

Credit authorized by the above procedure for flight and flight-related ground school courses may be applied as follows:

Students entering the *Flight Training Concentration* may apply up to seventeen (17) credits toward the academic major; any additional authorized flight training credit will be designated as free electives. *At least fifty percent (50%) of the credits in any major field (major department) must be earned at Bridgewater State College.*

Students entering the *Aviation Management Concentration* may apply seven (7) academic credits toward the required private pilot's license; any additional credits may be used toward free electives only.

Students entering the *Aviation Science Minor* may apply nine (9) credits toward the minor; any balance may be credited toward free electives.

Students who *neither major nor minor in Aviation Science* may be granted up to eighteen (18) academic credits toward free electives.

Authorized flight training credits specified above for the major, minor, and free electives may be applied toward the college graduation requirement of 120 credits (minimum).

Students Enrolled at Bridgewater State College:

After a student is officially enrolled at Bridgewater State College, academic credit from other institutions will be granted only as specified by college policy. Under special conditions where the college cannot provide the required course work, such as students being out of commuting range of the college during the summer, a student may apply for permission to earn credits at other institutions. The procedure which follows must be completed BEFORE courses are taken elsewhere. PERSONS (IN ANY MAJOR) WHO TAKE COURSES AT OTHER INSTITUTIONS/SCHOOLS WITHOUT FOLLOWING THIS PROCEDURE WILL NOT BE GRANTED CREDIT AT BRIDGEWATER STATE COLLEGE.

Procedure:

1. A form for requesting transfer credits may be obtained from the Office of the Registrar.
2. The completed form, together with an identification of the proposed school and a description of the courses involved, must be submitted to the coordinator of the Aviation Science Program, or a designee, for departmental approval. The Aviation Science Program is based on the quality specified in the Federal Aviation Regulation Part 141, and credit will be accepted only from FAR Part 141 approved schools.
3. Upon completion of courses taken at other institutions, students must satisfy the same conditions as set forth for entering freshmen and transfers, i.e., providing valid certification and passing a flight proficiency test, as described above.

School of Arts and Sciences

The student is responsible for insuring that all transcripts, certificates, or other documentation are submitted to the Office of the Registrar of Bridgewater State College, with copies to the Aviation Science coordinator, within six weeks after the completion of training. Official transcripts must be sent from the training institution *directly to Bridgewater State College. They must not be transported by the student.*

Please note: Additional detailed information on the Aviation Science Program is available. To receive a copy, call (508) 697-1237 or write Office of Admissions, Bridgewater State College, Bridgewater, Massachusetts 02325.



Management Science and Aviation Science

Course Offerings*

The departmental offerings listed below include the following which may not be taken for graduate credit: all courses at the 100 and 200 levels, MG 305, MG 498, MG 499, AC 498, AC 499, and all Aviation Science (AS) courses.

Management Science

MG 130 Principles of Management (3 crs.)

The principles and techniques underlying the successful organization and management of business activities. This course combines the traditional analysis of management principles with the behavioral approach to case studies. The study includes the management functions of planning, organization, leadership, staffing control, and the decision-making process. Three lectures weekly. *Either semester*

Note: MG 130 is prerequisite to all other Management courses.

MG 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman Honors Colloquia in Management Science allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) MG 135 fall semester, MG 136 spring semester

MG 140 Human Resources Management (3 crs.)

A study of the staffing, compensation systems, individual and group behavior, employee development, and human resource management systems. Three lectures weekly. *Either semester*

MG 150 Personal Finance (3 crs.)

The course examines a range of alternative investments with regard to risk and liquidity. It analyzes and compares such investments as real estate, business ownership, securities and other investment types, considering the effects of taxation and inflation. *Fall semester*

MG 200 Marketing Principles (3 crs.)

Develops students' understanding of the marketing function of an organization through: a survey of the history of marketing from its inception as distribution through the marketing concept being implemented in the 1980's; in-depth study of the elements of the marketing mix (product, price, place, and promotion); impact of external legal, political, sociological, and technological forces upon the marketing manager; and the structure and placement of the marketing organization presented through lecture, case study, and projects. (*Prerequisite: MG 130, EC 101, or consent of the department*) *Either semester*

MG 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquia in Management Science allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) MG 286 fall semester, MG 287 spring semester

MG 305 Business Law I (3 crs.)

A comprehensive study of law and the judicial process; the legal relationships among man, society and the business community; an analysis of the concept and legal consequences of contracts; business torts and crimes; consumer protection; personal property and bailments recovered. *Either semester*

MG 306 Business Law II (3 crs.)

A study of the basic legal principles encountered by management in the area of sales, commercial paper, agency, partnerships, corporations and government regulation of business. (*Prerequisite: MG 305*) *Spring semester*

MG 320 Retail Management (3 crs.)

An analysis of retail principles with emphasis on organization, consumer demand, store layout, buying merchandise, control and turnover of stock and retail sales promotion. The case method is utilized. (*Prerequisite: MG 200*) *Spring semester*

MG 324 Advertising (3 crs.)

A comprehensive survey of advertising and its applications in business and society. Among the topics considered are an historical survey of advertising, regulation of advertising, buyer behavior, advertising agencies, advertising media, copy and campaign management. (*Prerequisite: MG 200*) *Fall semester*

MG 325 Marketing & Sales Promotion: Industrial and Service Sector (3 crs.)

This upper-level elective course is for students who wish to develop promotional skills in a variety of specialized areas. Actual organizational case problems will be addressed. Projects will provide experience in all aspects of promotion with exposure to campaign proposals, incentives, trade show preparation and implementation, personal selling of services, media choice and related preparation. Students will have the opportunity for hands-on experience with trade shows, professional journal advertising, community relations work, and media personnel. (*Prerequisites: MG 200, CC 130*) *Spring semester*

MG 340 Labor Relations (3 crs.)

The course examines the background, philosophy, and structure of collective bargaining. Emphasis is placed upon the processes of negotiations, and administration of labor agreements. Case analyses dealing with problems involving unions, employers, and governments are reviewed and analyzed. (*Prerequisites: MG 130, MG 140*) *Spring semester*

*See pages 75-76 for general information regarding course offerings.

School of Arts and Sciences

MG 360 Business Data Processing (3 crs.)

An introduction to data processing from manual systems to computers; recent developments in the field; the equipment involved; how the equipment is used; how it operates; and the application of data processing systems will be covered. The course will aid students in applying the capabilities of the computer to their fields of study. *(Prerequisite: CS 105) Either semester*

MG 365 Federal Income Taxation I (3 crs.)

Provides background in Federal Income Tax Law and the regulations of the Treasury Department. Deals primarily with the basic philosophy of taxation, taxable income, allowable deductions, and gains and losses in sales and exchanges of property for the individual taxpayer. Serves also as an introduction to the federal taxation of partnerships and corporations. Emphasizes preparation of federal income tax return and the development of the ability to utilize various references in dealing with tax accounting problems. Discusses tax planning. *Fall semester*

MG 366 Advanced Taxation (3 crs.)

Examines in greater depth federal income tax law and regulations applicable to partnerships, corporations, and fiduciaries. Also covers federal gift and estate tax principles, reorganizations, personal holding companies and the accumulated earnings tax. Emphasizes tax planning, including timing of transactions, appropriate form of transactions, election of methods when alternative methods are made available under the law, and other lawful means to minimize the impact of taxation. Discusses procedures in the settlement of tax controversies. *(Prerequisite: MG 365) Spring semester*

MG 370 Operations Management (3 crs.)

This course acquaints the student with the basic principles and methods of production management and control as well as the qualitative and quantitative approaches to problem solving in the production management area. *(Prerequisite: MA 318 or consent of the instructor) Spring semester*

MG 375 Personnel Development (3 crs.)

The course introduces the student to the concepts of industrial and service training and will focus on the skills needed to perform the four roles of the training and development function: administrator, consultant, designer of learning experiences and instructor. *(Prerequisite: MG 140)*

MG 380 Decision Support Systems (3 crs.)

An analysis of the highest level of information support systems which serve the manager user. Theoretical concepts will be applied to real-world applications. *(Prerequisite: MG 360) Offered alternate semesters*

MG 385 Managerial Finance (3 crs.)

Provides understanding of the finance function and the responsibilities of the financial manager. Develops concepts and tools for use in effective financial decision making and problem solving. Covers ratio analysis, funds, flow, forecasting, current assets management, budgeting, credit services, formation and cost of capital and impact of operating and financial leverages. *(Prerequisite: AC 241, MG 130) Either semester*

MG 386 Capital Budgeting (3 crs.)

A study of methods of capital budgeting for profit and non-profit organizations. Analysis of such factors as risk, timing and measurement will be dealt with in detail. *(Prerequisite: MG 385) Spring semester*

MG 390 Investments (3 crs.)

Provides an understanding of the methods and techniques utilized in analyzing various securities for investment purposes. The importance of the business cycle, economy, and regulation is also addressed. *(Prerequisite: MG 385) Fall semester*

MG 399 Special Topics in Management (3 crs.)

Special topics will be offered in business, management, and allied subjects.

MG 410 International Marketing and Physical Distribution (3 crs.)

An examination of the concepts and practices of marketing management in the international and multinational settings, including all aspects of product distribution and control. *(Prerequisite: MG 200) Spring semester*

MG 420 Marketing Research (3 crs.)

An examination of the market research process used in approaching contemporary marketing problems. Emphasis is placed on the current status of research techniques and their applications. *(Prerequisite: MG 200, MA 110) Fall semester*

MG 430 Sales Management (3 crs.)

Sales programs must be formulated and then implemented. In this age of accelerating product complexity, this course will deal with the sales manager who must understand the importance of these major responsibilities. *(Prerequisite: MG 200) Spring semester*

MG 435 Small Business Management (3 crs.)

This course provides the student with an understanding of the unique characteristics required of the successful small business entrepreneur and the specifics relative to the start-up, financing and management of a small business. *(Prerequisite: MG 130 and AC 240) Fall semester*

MG 440 Industrial Marketing (3 crs.)

A study of contemporary market strategy techniques in industrial companies. Emphasis is placed on the case approach where students are provided an opportunity to develop strategies in response to given market opportunities and competitive behavior. *(Prerequisite: MG 200) Fall semester*

MG 445 Information Systems Management (3 crs.)

A course designed to equip students as future users of information systems. It deals with systems issues and management of the computer resource. It assumes only minimal technical background and prepares the student to make decisions on the acquisition of equipment, system analysis and related topics. "Management Problems" are used to relate course material to managerially-oriented decisions. *(Prerequisite: MG 360) Spring semester*

Management Science and Aviation Science

MG 450 Problems in Information Systems (3 crs.)

The content of this course varies. It is intended to introduce the student to significant topics which are not normally offered as separate courses. (*Prerequisite: approval of the department*)

MG 455 International Finance (3 crs.)

This course surveys the financial management of multinational corporations. After reviewing foreign exchange rate determinations, it then covers such timely topics as exchange risks, hedging, interest rate arbitrage, insurance and guarantee programs, and international capital markets. Analysis is made of multinational capital budgeting techniques, the cost of capital, and working capital management in a multinational corporate setting. (*Prerequisite: MG 385*)

MG 460 Management and Social Responsibility (3 crs.)

Aspects of management's responsibility to the owners, the employees and the community are investigated. Students will analyze recent and current events as well as text material in view of management's responsibilities to the total environment in which it must function. (*Prerequisites: MG 130, MG 140, MG 305*) *Spring semester*

MG 465 Options and Futures Markets (3 crs.)

This course familiarizes the student with two little known but potentially titanic markets in the securities industry. Both options and futures are the wave of things to come. The course begins with an historical account of the origins of the two markets and then an examination of the mechanisms of both markets. Much time is spent on hedging techniques and on the application of futures contracts to the food industries, and to banking and life insurance. (*Prerequisite: MG 385, MG 390*)

MG 470 Materials Management (3 crs.)

All aspects of materials management, including procurement, material requirements planning, capacity, requirements planning, forecasting and inventory management, as applied in both manufacturing and non-manufacturing business environments, are presented for analysis and discussion. (*Prerequisite: MG 370 or consent of instructor*) *Spring semester*

MG 475 Statistical Process Control (3 crs.)

The application of statistical methods to the control of product quality and process efficiency is increasingly important in both product manufacturing and in the service industries. Statistical lot sampling plans, statistical process control limits and the collection and evaluation of process performance data are presented in this course. (*Prerequisite: MG 370*)

MG 476 Insurance and Risk Management (3 crs.)

This course is designed to provide an understanding of the fundamental concepts of risk management in the areas of employee benefit programs, property damage and liability exposures and other business needs for insurance. The course will also provide an overview of the risk bearing industry, its function and importance, and its relevance in today's business markets. Emphasis will be on the insurance contracts themselves and the rating plans available. (*Prerequisite: EC 101-102, AC 240-241, MG 385*)

MG 480 Systems Analysis (3 crs.)

Studies systems analysis and the use of quantitative models and the computer in solving managerial problems in a variety of functional areas. The course introduces systems and models and the stages of a systems-analysis approach and provides an overview of systems applications at functional areas and computer techniques for systems, implementation in finance, operations and marketing. (*Prerequisite: MG 360, MG 445*) *Fall semester*

MG 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the Departmental Honors Committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project.

MG 486 Real Estate Investment and Finance (3 crs.)

This course is designed to provide a comprehensive overview of the subject of real estate finance, including such topics as valuation and appraisal, market analysis, mortgages, inflation effect on real estate markets, taxes, and legal considerations. This course will emphasize the fundamental theories that lead to current practice in today's market conditions and is designed for those finance majors interested in pursuing careers in real estate management, as well as those interested in broadening their understanding of this investment option. (*Prerequisite: EC 101-102, AC 240-241, MG 385*)

MG 490 Management Seminar (3 crs.)

Reading and discussion of important research and literature in student's particular field of interest, culminating in a major written paper. (*Prerequisite: Open to all Management Science seniors in the final semester of the program*) *Either semester*

MG 494 Marketing Management and Strategy (3 crs.)

Teaches the principles of formulating a marketing program. The course demonstrates how and why marketing programs are affected by the marketing forces that bear on the firm while remaining consistent with the needs of the target market segment. (*Prerequisite: MG 200 plus two other marketing courses*) *Fall semester*

MG 498 Internship in Management (3-15 crs.)

A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation. (*Prerequisite: consent of the department chairperson; formal application required*) *Either semester*

MG 499 Directed Study in Management (1-3 crs.)

Open to junior and senior majors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department; formal application required*) *Either semester*

School of Arts and Sciences

MG/PE 525 Time Management for Coaches (2 crs.)

This course will help coaches to successfully manage the professional and personal time demands they face. Students will examine their current time management effectiveness, will be provided with an overview of time management in theory and application, and will be given suggestions for developing their own time management system.

Accounting

AC 240 Accounting I (3 crs.)

Preparation of accounting statements; cash receivables, liabilities and inventory valuation; corporate financial reporting. Does not satisfy GER's. *Either semester*

AC 241 Accounting II (3 crs.)

Investments, fund and cash flow analysis, budgetary control, introduction to cost accounting. Does not satisfy GER's. *(Prerequisite: AC 240) Either semester*

AC 330 Cost Accounting I (3 crs.)

Basic cost concepts and cost procedures for manufacturing enterprises are studied. Job order product costing is emphasized. Topics include manufacturing cost-flow concepts, procedure and controls, factory and departmental burden rates, inventory-costing methods. *(Prerequisite: AC 241 and CS 105 or a working knowledge of Lotus 1-2-3) Fall semester*

AC 331 Cost Accounting II (3 crs.)

A continuation of Cost Accounting I. Additional study of process cost systems, in-depth study of variance analysis, in-depth study of performance measurement, transfer pricing, accounting for by-products and spoilage. The course will also introduce capital budget concepts. *(Prerequisite: AC 330) Spring semester*

AC 340 Intermediate Accounting I (3 crs.)

Basic accounting principles are reviewed. The income and statement of financial position are reviewed in depth. Cash and temporary investments, receivables, inventories, long-term investments, plant and equipment and intangible assets are studied. *(Prerequisite: AC 241) Either semester*

AC 341 Intermediate Accounting II (3 crs.)

A continuation of AC 340. Includes such topics as inventory cost procedures, special valuation, estimating procedures, investments (stocks, bonds, land, building and equipment); the acquisition, use of retirement, depreciation and evaluation of equipment; current and long-term liabilities; retained earnings and capital stock. *(Prerequisite: AC 340) Either semester*

AC 345 Auditing (3 crs.)

The qualifications and professional code of conduct of the auditor are discussed. Attention is then focused upon auditing procedures including the preparation of audit working papers and other steps required in the course of an audit. *(Prerequisite: AC 341; or may be taken concurrently with AC 341 with consent of the instructor) Spring semester*

AC 350 Managerial Accounting I (3 crs.)

This course presents the analysis and interpretation of accounting information: statement of changes in financial position; cost terms, cost-volume-profit relationships; break-even computations; product costing using the job order method; budgeting; responsibility accounting; standard costs; flexible budgets; and cost-behavior patterns. *(Prerequisite: AC 241 and CS 105 or a working knowledge of Lotus 1-2-3) Either semester*

Management Science and Aviation Science

AC 360 Advanced Accounting I (3 crs.)

A detailed study of partnerships and corporations including business combinations and segmental reporting of business entities. (Prerequisite: AC 341) Fall semester

AC 370 Accounting Information Systems (3 crs.)

This course integrates accounting processes and procedures as they relate to the total information system. Students study the design and implementation of accounting related information systems. Topics include internal control, design of flow charts, data flow diagrams, computerized financial reporting, and the impact of the accounting function on various elements of the organization. It covers the purchase decision for hardware and software and related accounting considerations. Exposure to the latest accounting software packages will be presented. (Prerequisite: AC 341, CS 105)

AC 399 Special Topics in Accounting/Finance (3 crs.)

Special topics will be offered in accounting, finance, and related subjects.

AC 492 Accounting Theory (3 crs.)

This course develops an understanding of generally accepted accounting principles along with the underlying concepts of the conventions of accounting. Emphasis is placed on current developments, recent FASB pronouncements and the role of the Securities Exchange Commission. The course will be augmented by visiting lecturers. (Prerequisite: AC 360) Spring semester

AC 498 Internship in Accounting (3-15 crs.)

A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation. (Prerequisite: consent of the department chairperson; formal application required) Either semester

AC 499 Directed Study in Accounting (1-3 crs.)

Open to junior and senior majors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: consent of the department; formal application required) Either semester

Aviation Science

AS 101 Primary Flight I (1 cr.)

This course consists of flight instruction and ground tutoring necessary for the student to accomplish his or her first solo flight. Lessons include elements of flight principles, pre-and-post flight procedures, taxiing and ground handling, use of flight controls, basic maneuvers, take-offs and landings. Introduction to aircraft systems, radio communications, and air traffic control procedures. One two-hour lecture/demonstration period weekly for one quarter. (Prerequisite or corequisite: AS 105) Either semester

AS 102 Primary Flight II* (1 cr.)

This course is a continuation of Primary Flight I, designed to prepare the student for solo cross-country flight. Lessons provide greater proficiency in maneuvers, stalls, take-offs and landings, and emergency procedures. Introduction to night flight, various types of VFR navigation and VOR tracing. Flight planning, cross-country flying culminating in solo cross-country. One two-hour lecture/demonstration period weekly for one quarter. (Prerequisite: AS 101) Either semester

AS 103 Primary Flight III (1 cr.)

Continuation of Primary Flight II with emphasis on cross-country navigation, flying, flight planning, and solo practice to gain proficiency in all basic maneuvers. Lessons include VFR radio and navigation control of aircraft solely by reference to instruments. Private pilot qualifications are completed. One two-hour lecture/demonstration period weekly for one quarter. (Prerequisite: AS 102) Either semester

AS 105 Private Pilot Ground School (6 crs.)

Topics include basic performance and aerodynamics of the airplane, airplane structure and systems, flight control and instruments, weight and balance, airports, communications, air traffic control, meteorology, and Federal Aviation Regulations. Aeronautical charts, airspace, radio navigation including VOR, DME, ADF, radar and transponders A.I.M. are considered, as well as use of the flight computer, cross-country flight planning and medical factors of flight. Students who meet Federal Aviation Administration (FAA) requirements will be qualified to take the FAA written examination. Six lecture periods weekly. Either semester

AS 201 Commercial Flight I* (1 cr.)

This course is the first in the professional pilot training series. Lessons include a review of basic flight maneuvers, instructions and solo proficiency practice in advanced maneuvers, precision landings, take-off and landing techniques. Introduction to altitude instrument flying. One two-hour lecture/demonstration period weekly for one quarter. (Prerequisite: AS 103 and AS 211, which may be taken concurrently) Either semester

*Flight simulator laboratory fees apply

School of Arts and Sciences

AS 202 Commercial Flight II* (2 crs.)

Concentrated instruction and solo practice in precision flight maneuvers. Introduction to flight in complex aircraft, experience in night and cross-country flying. Three two-hour lecture/demonstration periods weekly for one quarter. *(Prerequisite: AS 201) Either semester*

AS 203 Commercial Flight III* (2 crs.)

Review and practice of basic and advanced flight maneuvers. Concentrated instrument flight instruction including IFR navigation, use of VOR, ADF, localizer, holding patterns, flight planning, procedures and regulations. Two two-hour lecture/demonstration periods weekly for one quarter. *(Prerequisite: AS 202) Either semester*

AS 204 Commercial Flight IV* (2 crs.)

Review and practice of precision maneuvers. Continued instrument flight instruction with emphasis on aircraft control, IFR flight planning, departure, enroute, holding, and arrival procedures, instrument approaches, IFR procedures and regulations. Two two-hour lecture/demonstration periods weekly for one quarter. *(Prerequisite: AS 203; and AS 212, which may be taken concurrently) Either semester*

AS 205 Commercial Flight V* (1 cr.)

This course is the final stage of the commercial/instrument series, consisting of a complete review of all commercial maneuvers, instrument flying techniques, procedures, and regulations. Course culminates in recommendation for the FAA Commercial/Instrument Flight Test. One two-hour lecture/demonstration period weekly for one quarter. *(Prerequisite: AS 204, 211, 212) Either semester*

AS 211 Commercial Pilot Ground School (4 crs.)

Subject matter involves advanced treatment of the airplane systems, performance and control, the National Airspace System, Federal Aviation Regulations, meteorology, radio navigation, and the physiology of flight. Students who meet Federal Aviation Administration (FAA) requirements will be qualified to take the FAA written examination. Four lecture periods weekly. *(Prerequisite: AS 105 and FAA requirements) Either semester*

AS 212 Instrument Pilot Ground School (4 crs.)

Topics include discussion of aircraft environmental control systems and commercial flight planning, study of instrument flight charts, IFR departure, enroute, and approach procedures. FAR's, IFR Flight Planning. Students who meet Federal Aviation Administration (FAA) requirements will be qualified to take the FAA written examination. Four lecture periods weekly. *(Prerequisite: AS 105 and FAA requirements) Either semester*

AS 215 Single Engine Flight Simulator Instruction (1-3 crs.)

Single engine flight simulated instruction is conducted with the use of a flight simulator. The course content will be determined in accordance with the flight experience of the student. A student must enroll for a minimum of one credit. The course may be repeated for a maximum of three credits. (Fifteen hours of instruction are required for one credit.) *(Prerequisite: AS 105 or consent of the instructor) Either semester*

**Flight simulator laboratory fees apply*

AS 216 National Airspace System (3 crs.)

An overview of the proposed National Airspace System. Examination is made of problems encountered in implementing the system, airspace allocation and usage, facilities, safety considerations, new developments in electronic navigation and control systems, economic impact, social and political implications. Three lectures weekly. *Spring semester*

AS 217 Air Traffic Control (3 crs.)

This course deals with the U.S. air traffic and airway system as it exists today. Topics of discussion will include: components of the system; air route traffic control centers; towers; flight service stations; navigational aids; and the low/high altitude Federal airway structure. *(Prerequisite: AS 105)*

AS 301 Instructional Flight I (2 crs.)

This course is the first stage of instruction to the Certified Flight Instructor Certification. Lessons include analysis of flight maneuvers, take-offs, landings, stalls, emergencies, procedures. Practice flight and ground instruction. Two two-hour lecture/demonstration periods weekly for one quarter. *(Prerequisite: AS 205) Either semester*

AS 302 Instructional Flight II (1 cr.)

Continuation of Instructional Flight I. Lessons include analysis and practice instruction of advanced maneuvers, altitude instrument flying, considerations of night flight, aircraft performance and control, spins, cross-country flight and navigation. Leads to certification by the FAA. One two-hour lecture/demonstration period weekly for one quarter. *(Prerequisite: AS 301, 303 -- may be taken concurrently) Either semester*

AS 303 Flight Instructor Ground School (4 crs.)

Provides aviation instructors with easily understood learning and teaching information, and its use in their task of conveying aeronautical knowledge and skills to students. Topics include aspects of human behavior, teaching methods and communication, evaluation and criticism, instructional planning, instructor characteristics and responsibilities. Students who meet Federal Aviation Administration (FAA) requirements will be qualified to take the FAA written examination. Four lecture periods weekly. *(Prerequisite: AS 205 and FAA requirements) Either semester*

AS 305 Introduction to Aviation Management (3 crs.)

Survey of general aviation industry; basics of aircraft operations; marketing of products and services; legal aspects; physical facilities; major concentration will be placed on management and administration of a fixed base operation, duties and responsibilities of the airport manager and managerial considerations in all areas of general aviation. Three lectures weekly. *(Prerequisite: MG 130) Fall semester*

AS 306 General Aviation Operations (3 crs.)

This course is a combination of lecture and laboratory. Lectures deal with facilities, management, finance, legal and insurance aspects of general aviation. Laboratory sessions focus on sales, line service, air taxi, and flight school. One or more field trips to general aviation operations will be held. A semester project is required. One four-hour lecture/laboratory period weekly. *(Prerequisite: AS 305) Spring semester*

Management Science and Aviation Science

AS 307 Air Transportation (3 crs.)

This course covers development, regulation and administration of air transportation, economic information on airlines, alternate transportation modes and their effect on air transportation, contemporary problems of route congestion, pollution aspects, terminal capacity, ground support, changing trends in air freight, and new developments in air transportation regulations. Three lectures weekly. *(Prerequisite: MG 130) Fall semester*

AS 308 Airline Operations (3 crs.)

An in-depth study of U.S. air carrier operations. The economics, organization, and regulation of domestic air carriers are covered in detail. Field trips to the operational sites of major carriers. Air carrier training programs are explored in this course. Three lectures weekly. *(Prerequisite: AS 305) Spring semester*

AS 310 Aviation Science Safety (3 crs.)

The primary emphasis of this course is to instill safety consciousness. It encompasses the role of federal organizations involved with aviation safety and stresses their contributions to the aerospace industry. The course will explore flight physiology, utilization of aeronautical services and facilities, an historical perspective, and analyzing documented case studies. *(Prerequisites: AS 211 and AS 212, or Commercial Pilot with Instrument Rating Certificate--Airplane) Either semester*

AS 316 Multi-Engine Flight Simulator Instruction (1-3 credits)
Multi-engine flight simulated instruction is conducted with the use of a flight simulator. The course content will be determined in accordance with the flight experience of the student. Students must enroll for a minimum of one credit. The course may be repeated for a maximum of three credits. (Fifteen hours of instruction are required for one credit.) *(Prerequisite: AS 413 or consent of the instructor) Either semester*

AS 402 Insurance and Legal Aspects of Business Aviation (3 crs.)
An in-depth study of U.S. and international laws governing aviation. A survey of appropriate risk management policies of aviation. The case method is employed to present practical applications of principles under consideration. Three lectures weekly. *Fall semester*

AS 407 Aviation Marketing Management (3 crs.)

Selling and pricing business aviation services and creative marketing strategy are studied in an analytical approach to advertising, sales force administration, promotion, distribution, retailing, logistics, wholesaling, product planning, price policies, market research, and consumer behavior. Three lectures weekly. *Spring semester*

AS 411 Instrument Flight Instructor Ground School (2 crs.)

Techniques of teaching instrument flight, analysis of instrument maneuvers and approaches, enroute operations, and lesson planning. AS 411 will prepare students for the Federal Aviation Administration (FAA) instrument flight and ground instructor written examinations. Meets four hours per week for one quarter. *(Prerequisite: Commercial certificate with instrument rating and airplane flight instructor certificate) Either semester*

AS 412 Instrument Flight Instructor Flight Training (2 crs.)

Teaching analysis of altitude instruments, instrument approaches, and enroute operations. This course will prepare students for the Federal Aviation Administration (FAA) practical test. Two two-hour lecture/demonstration periods weekly for one quarter. *(Prerequisite: AS 411) Either semester*

AS 413 Multi-Engine Rating Ground School (1 cr.)

This course prepares the prospective multi-engine pilot for the flight portion of the Federal Aviation Administration (FAA) multi-engine certification, including an in-depth study of multi-engine aerodynamics, systems, weight and balance, performance and emergencies. Meets two hours per week for one quarter. *(Prerequisite: commercial certificate with instrument rating) Either semester*

AS 414 Multi-Engine Flight Training (1 cr.)

This course prepares the prospective multi-engine pilot for the Federal Aviation Administration (FAA) multi-engine flight test. It includes multi-engine maneuvers, systems, weight and balance, and emergencies. One two-hour lecture/demonstration period weekly for one quarter. *(Prerequisite: AS 413) Either semester*

AS 415 Commuter Airline and Corporate Aviation Management (3 crs.)

This course provides an in-depth examination of the history and management practices of commuter airline and corporate aviation. Commuter airline certification, aircraft selection, and operations will be analyzed, as well as corporate flight department economics and operations. Three lectures weekly. *(Prerequisite: AS 305, AS 306) Fall semester*

AS 416 Multi-Engine Instructor Ground School (2 crs.)

This course involves techniques of teaching multi-engine flight, multi-engine operations and systems, aerodynamics of multi-engine flight, environmental systems, and multi-engine airplane instruction. One two-hour lecture/demonstration period weekly. *(Prerequisite: FAA requirements) Either semester*

AS 417 Multi-Engine Instructor Flight Training (2 crs.)

This course covers the development of aeronautical skill and experience in multi-engine aircraft as well as acquisition of teaching proficiency from right seat of multi-engine airplane. One two-hour lecture/demonstration period weekly for one quarter. *(Prerequisite: FAA requirements) Either semester*

AS 498 Internship in Aviation Science (3-15 crs.)

Instructive endeavor in the aviation industry or an aviation related business which complements the academic program. *(Prerequisite: consent of the coordinator of Aviation Science; formal application is required) Either semester*

AS 499 Directed Study in Aviation Science (1-3 crs.)

Open to junior and senior majors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. *(Prerequisite: consent of the department; formal application required) Either semester*

Department of Mathematics and Computer Science

Faculty

Chairperson: Professor Philip Scalisi

Professors: Robert Bent, Jeffrey Butz, Hang-Ling Chang, Zon-I Chang, Paul Fairbanks, Walter Gleason, Thomas Moore, Jean Prendergast, George Sethares

Associate Professors: Frank Lambiase, Michael Makokian, John Nee, Glenn Pavlicek, Uma Shama, Robert Sutherland

Assistant Professors: Torben Lorenzen, Gail Price, Richard Quindley, Abdul Sattar, Donald Simpson

Temporary Assistant Professor: Linda Wilkins

Undergraduate Programs

Bachelor of Arts/ Bachelor of Science in Mathematics

Since mathematics is both a cultural and a technical field of study, the curriculum is planned with the following objective:

1. to introduce students to mathematics as an important area of human thought;
2. to prepare students for careers in industry;

3. to give preparation to students for graduate study in mathematics and related fields;
4. to prepare students planning to teach mathematics on the secondary level;
5. to serve the needs of students in fields which rely on mathematics, e.g., experimental sciences, social sciences, and elementary education.

Double Major with Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in Mathematics and Elementary Education, Early Childhood Education or Special Education for certification purposes. Appropriate advising materials with suggested course sequences are available.

Bachelor of Arts/ Bachelor of Science in Computer Science

This program provides a broad background in computer science and will serve as preparation for employment in computer applications or for graduate studies in the field.

The department participates in a number of multidisciplinary programs for students preparing for careers in medicine, dentistry, or oceanography. Additional information on these programs may be found in the section *Multidisciplinary and Pre-Professional Programs*.

Mathematics and Computer Science

Mathematics Major

All majors are required to take:

MA 151-152 Calculus I-II
MA 201 Calculus III
MA 202 Linear Algebra
MA 301 Abstract Algebra I
MA 401 Introduction to Analysis I

One course from the following: CS 101 or CS 200

Five electives from any 300 or 400 level courses except MA 318. Majors preparing for secondary school teaching careers must take MA 403 Probability Theory and four electives.

All majors must also successfully complete PH 243-244 General Physics I-II.

Students who are contemplating majoring in mathematics or computer science should be aware of the sequential nature of the course offerings. It is of prime importance that students consult with the chairperson of the department as soon as possible. This will enable them to plan their programs so that degree requirements may be completed within a four year period.

Computer Science Major

All majors are required to take:

CS 101 Computer Science I
CS 102 Computer Science II
CS 201 Assembly Language Programming
CS 206 Introduction to Computer Organization
CS 330 Data Structures and Algorithms
CS 336 File Processing and Business Applications
CS 340 Organization of Programming Languages
CS 350 Operating Systems

At least three electives (semester hours) must be selected from:

CS 280 Fundamentals of Microprocessors and Microcomputers
CS 345 Compiler Construction
CS 395 Computer Science Seminar
CS 399 Topics in Theoretical Computer Science
CS 405 Introduction to Database Systems
CS 430 Computer Networks
CS 435 Analysis of Algorithms
CS 436 Computer Graphics

CS 445 Logic Programming
CS 460 Introduction to Robotics
CS 470 Introduction to Artificial Intelligence
CS 498 Internship in Computer Science
MA 382 Switching Theory
or
MA 415 Numerical Analysis
PH 392 Digital Electronics

All majors must also take:

MA 120 Introduction to Linear Algebra
MA 130 Discrete Mathematics I
MA 151-152 Calculus I-II
MA 330 Discrete Mathematics II

Not more than one grade in the D range (D+, D, D-) among the five courses CS 101, CS 102, CS 201, CS 206 and CS 330 shall be accepted in partial fulfillment of the requirements for the major in computer science. A student receiving a second D in one of the above must repeat the course with the higher number and receive a C- or better before being allowed to enroll in other computer science courses.

Any computer science major who has successfully completed CS 102 will not be allowed to take CS 100 or CS 105 for academic credit.

Mathematics Minor

A minimum of eighteen hours is required. Students must satisfy the following three requirements:

1. MA 151-152 Calculus I-II or MA 141-142 Elements of Calculus I-II.
2. One course from among:
MA 120 Introduction to Linear Algebra
MA 202 Linear Algebra
MA 214 Introduction to Modern Algebra
3. Three *additional* courses from among:
MA 110 Elementary Statistics I
MA 111 Elementary Statistics II
MA 120 Introduction to Linear Algebra
MA 130 Discrete Mathematics I
MA 200 Probability and Statistics
MA 201 Calculus III
MA 202 Linear Algebra
MA 214 Introduction to Modern Algebra
MA 216 Analytic Geometry
any 300 or 400 level MA courses

School of Arts and Sciences

Students who take one course from any of the following pairs of courses may not take the other course of that pair for credit towards the minor

- MA 110 and MA 200
- MA 120 and MA 202
- MA 214 and MA 301

Students may elect to take MA 220 Introduction to Calculus to satisfy #1 above. Students who do so must take four courses to satisfy #3 above although they may use up to two courses from among MA 105 Selected Topics in Mathematics, MA 107 College Math for Elementary Majors I, and MA 108 College Math for Elementary Majors II to satisfy that requirement.

Computer Science Minor

- CS 101 Computer Science I
- CS 102 Computer Science II
- CS 201 Assembly Language Programming and three additional courses.

These three additional courses to be selected from:

- PH 392 Digital Electronics
- and any computer science courses which are approved for majors.

Graduate Programs

Master of Science in Computer Science

The Master of Science in Computer Science is intended to meet the growing need for high-level computer professionals by:

- Strengthening the preparation of individuals currently working in computer-related fields;
- Training professionals in other areas who wish to apply computer science to their respective fields or who desire to retrain for entry in a computer science career;
- Providing the necessary general and theoretical background for those individuals who wish to continue graduate study in computer science beyond the master's degree.

The program consists of 30 credit hours and may be completed entirely on a part-time basis (courses are offered in the late afternoon or evening).

To be admitted into the program, if the student's undergraduate major was not in computer science, the student must have completed (with a grade of B or better) courses in:

- A recursive high-level language such as Pascal;
- An assembly language;
- Discrete mathematical structures;
- Data structures;
- Calculus (at least two semesters);
- Linear algebra.

Graduate students accepted with course deficiencies will be required to take the prescribed undergraduate work without credit toward the degree.

1. Candidates must successfully complete each of the following course:

- CS 520 Operating Systems Principles
- CS 540 Automata, Computability, and Formal Languages
- CS 545 Analysis of Algorithms
- CS 560 Artificial Intelligence
- CS 590 Computer Architecture

2. Candidates must successfully complete five courses from among the following:

- CS 510 Topics in Programming Languages
- CS 525 Design and Construction of Compilers
- CS 530 Software Engineering
- CS 536 Graphics
- CS 550 Topics in Discrete Mathematics
- CS 562 Expert Systems
- CS 565 Logic Programming
- CS 570 Robotics
- CS 575 Natural Language Processing
- CS 580 Database Systems
- CS 582 Distributed Database Systems
- CS 594 Computer Networks
- CS 596 Topics in Computer Science
- CS 599 Computer Science Seminar

3. Candidates must pass a comprehensive examination on the subject matter of the five required courses. This examination may be taken twice.

Sample Program (for a full-time student)

- First semester: CS 540, CS 590
- Second semester: CS 545, Elective, Elective
- Third semester: CS 560, CS 520
- Fourth semester: Elective, Elective, Elective

Master of Arts in Teaching (Mathematics)

The department offers a program leading to the degree of Master of Arts in Teaching with a concentration in Mathematics. Admission to the graduate program requires a minimum of 18 credits of undergraduate mathematics or the approval of the chairperson of the department. All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult the Graduate School section of this catalog), and a minimum of 18 appropriate graduate credits in mathematics (approved by the program adviser on the basis of the background, interests, and needs of the student).

Liberal arts graduates seeking high school teacher certification through the M.A.T. program should consult the *Department of Secondary Education and Professional Programs* section of this catalog for detailed requirements.

The departmental offerings listed below include the following courses which may not be used in fulfillment of the department's M.A.T. degree requirements:

Any 100 and 200 level courses
MA 321 Introduction to Probability
MA 354 Introduction to Modern Geometry
MA 450 Topics in Mathematics for Elementary School Teachers
MA 499 Directed Study in Mathematics
All CS courses.



School of Arts and Sciences

Course Offerings*

Mathematics

MA 100 Precalculus Mathematics** (3 crs.)

This course provides a review of algebraic fundamentals (exponents, logarithms, linear and quadratic equations) and a study of functions of various types (polynomial, rational, transcendental). Formerly MA 106. *Either semester*

MA 105 Selected Topics in Mathematics** (3 crs.)

The nature and process of mathematical thinking (inductive, deductive, and algorithmic), as well as applications and results, are the underlying components of this course. Possible topics to be explored include sets, logic, number theory, geometry, graph theory and probability. A selection of three or more such topics will be offered each semester. Satisfies the GER in Mathematics. *Either semester*

MA 107 College Mathematics for Elementary Majors I (3 crs.)

Theory of sets, relations and their properties, systems of numeration, axiomatic approach to the real number system through a study of the integers and rational numbers, elementary number theory, nonmetric and analytic geometry, groups, linear equations and inequalities, probability. *Either semester*

MA 110 Elementary Statistics I** (3 crs.)

Measure of central tendency and variability; elementary probability; binomial, normal and t distributions; hypothesis testing and confidence intervals. *Either semester*

MA 111 Elementary Statistics II (3 crs.)

The continuation of topics in MA 110. Additional work with regression and correlation. Additional work with chi-squared analysis of variance, nonparametric statistics. (Prerequisite: MA 110) *Spring semester*

MA 120 Introduction to Linear Algebra** (3 crs.)

This course will consider linear congruences, groups, matrices and linear systems. Formerly MA 223. *Fall semester*

MA 130 Discrete Mathematics I** (3 crs.)

This course provides some of the mathematical background necessary for computer science. Topics include combinations and discrete probability, discrete functions and graph theory. Formerly CS 205. *Spring semester*

MA 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman Honors Colloquia in Mathematics allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (Prerequisite: consent of the instructor) *MA 135 fall semester, MA 136 spring semester*

MA 141 Elements of Calculus I*** (3 crs.)

This course introduces the student to the main concepts, methods, and techniques of differential calculus. Emphasis is on how these arise from problems in several areas, rather than from a rigorous development of the theory. A principal objective of this course is to illustrate how mathematics is used to model physical reality and how such a mathematical model facilitates the solution of problems. This course does not satisfy mathematics major requirement. Formerly MA 103. Satisfies the GER in Mathematics. *Either semester*

MA 142 Elements of Calculus II (3 crs.)

The topics include the integral and its applications as well as multivariable calculus. Additional topics are selected from: differential equations, Taylor series and probability distributions. This course does not satisfy mathematics major requirements. Formerly MA 104. (Prerequisite: MA 141) *Either semester*

MA 151 Calculus I*** (4 crs.)

This course introduces the student to a rigorous development of the differential calculus. Emphasis is on the development of the concepts of calculus as typical of a cohesive mathematical theory. Formerly MA 101. Satisfies the GER in Mathematics. *Fall semester*

MA 152 Calculus II (4 crs.)

This course is an intensive study of the integral and its applications, transcendental functions, conic sections, and additional techniques of integration. Formerly MA 102. (Prerequisite: MA 151) *Spring semester*

MA 160 Math at Bridgewater (3 crs.)

Students work in small groups under the guidance of faculty and advanced undergraduates to work on challenging problems which parallel the material in the calculus courses. Goals include enhanced performance in calculus and increased confidence in one's ability to succeed in mathematics. (This course carries no graduation credit and may be repeated.) Graded P/F. (Prerequisites: must be taken in conjunction with a calculus course--either MA 141, 142, 151, or 152.)

MA 200 Probability and Statistics (3 crs.)

Permutations and combinations; types of events, conditional probability, elementary probability distributions, elementary cumulative distributions, mathematical expectation, measures of central tendency, variance and standard deviation, normal distributions. Additional statistics topics as time allows. (Prerequisite: MA 142 or MA 152) *Either semester*

*See pages 75-76 for general information regarding course offerings.

**The prerequisite for MA 100, MA 105, MA 110, MA 120, and MA 130 is a mathematics placement test score of level 1.

***The prerequisite for MA 141 and MA 151 is MA 100 or a mathematics placement test score of level 2.

Mathematics and Computer Science

MA 201 Calculus III (4 crs.)

This course covers infinite sequences and series and multivariable calculus including: partial differentiation, directional derivatives, max/min theory, and multiple integration. (*Prerequisite: MA 152*)

MA 202 Linear Algebra (4 crs.)

Vector spaces, linear transformations, matrices, systems of linear equations, and determinants. (*Prerequisite: one year of calculus or consent of the department*) *Spring semester*

MA 214 Introduction to Modern Algebra (3 crs.)

Linear congruences, groups, matrices, and linear systems. (*Prerequisite: MA 105 or MA 100 or MA 107 or consent of the department*) *Offered alternate years, fall semester*

MA 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquia in Mathematics allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) *MA 286 fall semester, MA 287 spring semester*

MA 301 Abstract Algebra I (3 crs.)

Study of relations, functions, and binary operations. Introduction to the theory of rings, integral domains and fields through a study of integers, rational numbers, real numbers, complex numbers and polynomials; elementary group theory. (*Prerequisite: consent of the department*) *Fall semester*

MA 302 Abstract Algebra II (3 crs.)

Group theory, linear groups, rings and ideals, extensions of rings and fields. (*Prerequisite: MA 301*)

MA 303 Number Theory (3 crs.)

Development of the number system, the Euclidean Algorithm and its consequences, theory of congruences, number-theoretic functions, Diophantine equations, quadratic residues. (*Prerequisite: consent of the department*) *Offered alternate years, spring semester*

MA 304 Introduction to Topology (3 crs.)

This course is an introduction to point set topology, beginning with metric spaces and proceeding to general topological spaces. Topics include compactness, separation, connectedness, continuity, and associated function spaces. (*Prerequisite: consent of the department*) *Either semester*

MA 316 Differential Equations (3 crs.)

Ordinary differential equations of first and second order, linear differential equations with constant coefficients, the Laplace transformation, applications. (*Prerequisite: MA 201*) *Spring semester*

MA 317 Sequences and Series (3 crs.)

Elementary point-set theory, Heine-Borel theorem, Cauchy sequences, convergence tests for infinite series, absolute convergence, power series, Taylor series and Fourier series. (*Prerequisite: MA 201*) *Offered once in three years, spring semester*

MA 318 Quantitative Methods for Management (3 crs.)

Selected mathematical tools and techniques for analysis of business and economic problems as an aid to decision-making in management. Models and applications related to decision theory, linear programming, inventory, queuing, forecasting and other standard qualitative concepts. (*Prerequisite: MA 142 and MA 110 or equivalent*) *Either semester*

MA 321 Introduction to Probability (3 crs.)

Permutations and combinations; sample spaces, types of events, conditional probability, Chebyshev's Theorem, Bayes' Theorem, the six (classic) discrete probability distributions, mathematical expectation, the normal distribution. (*Prerequisite: MA 105 or MA 100 or MA 108 or consent of the department*). *Offered alternate years, spring semester*

MA 325 Foundations of Geometry (3 crs.)

An in-depth study of Euclid's, Hilbert's, etc., axioms for Euclidean geometry, its undefined relations (incidence, congruence, betweenness and parallelism) and functions (measurement). (*Prerequisite: MA 301 or consent of the department*) *Offered alternate years, fall semester*

MA 326 Projective Geometry (3 crs.)

A synthetic and analytic study of the axioms and properties of the projective plane; the projective group of transformations, its subgeometries and their invariant properties. (*Prerequisite: MA 120 or consent of the department*) *Offered alternate years, fall semester*

MA 330 Discrete Mathematics II (3 crs.)

Course topics will include formal logic, automata and formal languages, and an introduction to the analysis of algorithms. (*Prerequisite: MA 130 and CS 102*) *Either semester*

MA 338-339 Honors Tutorial (3 crs. each semester)

Special topics in mathematics. Open to All-College and Departmental Honors students. Three hourly meetings weekly. (*Prerequisite: consent of the department*) *MA 338 fall semester, MA 339 spring semester*

MA 382 Switching Theory (3 crs.)

Boolean algebra and functions. Combinational and sequential logic nets, threshold logic, minimization theory, completeness theorems. Introduction to automata theory. (*Prerequisite: MA 301 and CS 101*) *Offered once in three years, spring semester*

MA 399 Topics in Advanced Mathematics (3 crs.)

Special topics selected from the general areas of algebra, analysis, and applied mathematics. *Either semester*

MA 401 Introduction to Analysis I (3 crs.)

Logic and proof techniques are followed by basic theorems on the topology of real numbers, compactness, limits, sequences, continuity and differentiability. (*Prerequisite: MA 201*)

School of Arts and Sciences

MA 403 Probability Theory (3 crs.)

All elementary probability topics: permutations and combinations, types of events, conditional probability, Bayes' Theorem and so on. A calculus approach to probability distribution and cumulative distributions, moment and moment generating functions. (*Prerequisite: MA 201*) *Offered alternate years, fall semester*

MA 408 History of Mathematics (3 crs.)

The development of elementary mathematics from ancient to modern time. (*Prerequisite: consent of the department*) *Offered alternate years, fall semester*

MA 412 Mathematical Statistics (3 crs.)

A calculus based approach to statistical topics: hypothesis testing, estimations, correlation and regression, analysis of variance, the gamma distribution, the t distribution, the chi-squared distribution, the F distribution and so on. (*Prerequisite: MA 403 or consent of the department*) *Offered alternate years, spring semester*

MA 415 Numerical Analysis (3 crs.)

Solution of algebraic and transcendental equations, general iteration method, Newton-Raphson method. Approximation of functions and curve fitting, Lagrange interpolation formula, Newton's forward difference method, method of least squares, orthogonality. Numerical integration, Euler-Cauchy technique. (*Prerequisite: MA 201*) *Offered alternate years, fall semester*

MA 416 Applied Mathematics (3 crs.)

Fourier analysis, solutions of partial differential equations, special functions, and line and surface integrals. *Offered alternate years, fall semester*

MA 417 Introduction to Complex Analysis (3 crs.)

This course is an introduction to functions of one complex variable. Topics include complex numbers, stereographic projection, analytic and harmonic functions, conformal mapping and Cauchy's Theorem. (*Prerequisite: consent of the department*) *Either semester*

MA/CS 445 Logic Programming (3 crs.)

The study of propositional and first order predicate logic from an axiomatic point of view. Algorithmic methods of theorem proving will be emphasized. (*Prerequisite: junior or senior Mathematics or Computer Science major or equivalent background, and consent of the department*) *Fall semester*

MA/CS 460 Introduction to Robotics (3 crs.)

An introduction to the theory of the motion of robot manipulators. The mathematics, programming and control of manipulators will be emphasized. Also examined will be issues of sensing and planning. (*Prerequisite: MA 152, or MA 142 and either MA 202 or MA 120, and CS 102*) *Spring semester*

MA 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the Departmental Honors Committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to

graduate with honors will be determined by the Departmental Honors Committee. *Either semester*

MA 490 Mathematics Seminar (3 crs.)

Topics to be selected from algebra, geometry, and analysis. May be offered as a quarter or semester course. (*Prerequisite: MA 201, MA 202, and MA 301 or consent of the department*) *Offered alternate years, spring semester*

MA 499 Directed Study in Mathematics (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department; formal application required*) *Either semester*

Other Approved Courses:

MA 108 College Mathematics for Elementary Majors II

MA 216 Analytic Geometry

MA 220 Introduction to Calculus

MA 230 Business Mathematics

MA 349 Foundations of Mathematics

MA 354 Introduction to Modern Geometry

MA 402 Introduction to Analysis II

MA 406 Theory of Sets and Elementary Logic

MA 450 Topics in Mathematics for Elementary School Teachers

MA 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

MA 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

MA 507 Topology (3 crs.)

Elements of point set topology, closed sets and open sets in metric spaces, continuous mappings, connection, separation theorems, and compactness. (*Prerequisite: MA 201 and MA 301 or equivalent*)

MA 508 History of Mathematics (3 crs.)

The development of elementary mathematics from ancient to modern time (*Prerequisite: consent of the department*)

MA 510 Group Theory (3 crs.)

Groups, subgroups, homomorphisms, normal subgroups and quotient groups, generators, normal structure and the Jordan-Holden Theorem, direct products of groups. (*Prerequisite: MA 401 or equivalent*)

MA 511 Ring Theory (3 crs.)

Examples of rings, ideals and homomorphisms, the Jacobson radical, direct sums, Boolean rings, rings with chain conditions. (*Prerequisite: MA 301 or equivalent*)

Mathematics and Computer Science

MA 518 Topics in Analysis (3 crs.)

Complete ordered fields, approximation theory, including Weierstrass and Bernstein's theorems, continuous, non-differentiable functions, and various topics from complex analysis, time permitting. (*Prerequisite: MA 401 or consent of the department*)

MA 520 Real Analysis (3 crs.)

Sets and functions, sequences and series, metric spaces, Weierstrass Approximation Theorem, Riemann and Lebesgue Integrals, Fourier Series. (*Prerequisite: MA 401*)

MA 522 Complex Analysis (3 crs.)

Analytic functions of a complex variable, differentiation and integration in the complex plane. Cauchy's theorems, infinite series, Laurent expansions, theory of residues. (*Prerequisite: MA 401*)

MA 525 Mathematics in Science (3 crs.)

This course, contains the mathematical background necessary for a variety of science applications. Topics include linear algebra, statistics, discrete mathematics, geometry, calculus and numerical analysis as well as computer software to enhance their application to problem solving in science. (*Prerequisites: High School/Middle School Teacher of Mathematics or Science.*)

Computer Science

CS 100 Programming in BASIC (3 crs.)

Problem solving. Principles of computer programming taught with the aid of the BASIC language. Topics to include the LET, INPUT, READ, IF and FOR statements; arrays; numerical and string functions; other topics as time allows. *Either semester*

CS 101 Computer Science I (3 crs.)

A first course in programming. Introductory concepts of computer organization. Problem solving methods and algorithmic development stressing good programming style and documentation including top down and modular design. This course emphasizes problem solving with Pascal programming exercises run on the computer. *Either semester*

CS 102 Computer Science II (3 crs.)

Advanced programming techniques. Introduction to basic aspects of recursion. In core search and sort methods, simple data structures, subroutines and parameters, and algorithmic analysis. Techniques of algorithmic development and programming will be stressed. The emphasis on good programming style and documentation begun in CS 101 will be continued. *Either semester*

CS 105 Computers and Their Applications: An Introduction (3 crs.)

This introductory course includes a discussion of topics selected from: file management, gaming, computer assisted instruction, process control, simulation and modeling. Problem solving using computers with emphasis on analysis, formulation of algorithms and programming. Social implications and the future of computers. Not for students with computer experience. *Either semester*

CS 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman Honors Colloquia in Computer Science allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) CS 135 fall semester, CS 136 spring semester

CS 200 FORTRAN (3 crs.)

A problem solving course using FORTRAN language. Structured programming techniques will be emphasized. (*Prerequisite: proficiency in at least one programming language*) Spring semester

CS 201 Assembly Language Programming (3 crs.)

A basic course in machine-level programming. Number systems and data representation; arithmetic and logical instructions, indexing, I/O, subroutines; structure and modularity of programs and data at the machine level. Macro definition, recursion. This course will emphasize programming in assembly language. (*Prerequisite: CS 102*) *Either semester*

School of Arts and Sciences

CS 206 Introduction to Computer Organization (3 crs.)

Organization and structure of the major hardware components of computers. Mechanics of information transfer and control within a digital computer system. Fundamentals of logic design. The major emphasis of the course concerns the functions of and communication between the large scale components of a computer system, including properties of I/O devices, controllers, and interrupts. *(Prerequisite: CS 201) Either semester*

CS 210 COBOL I (3 crs.)

The elements of structured COBOL programming. Topics from among: arithmetic operation statements, report editing, heading lines, comparisons, complex and nested IF statements, single and multiple level control break processing with group indication, one-dimension table processing: subscript, index, table search. *(Prerequisite: knowledge of at least one programming language) Either semester*

CS 211 COBOL II (3 crs.)

Continuation of topics of structured COBOL programming. Topics from among: multi-level tables, subprograms, input editing, report writer facility, the sort facility, sequential files, indexed sequential files, and relative files. Creation and file update for sequential and indexed sequential files. *(Prerequisite: CS 210) Spring semester*

CS 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquia in Computer Science allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. *(Prerequisite: consent of the instructor) CS 286 fall semester, CS 287 spring semester*

CS 330 Data Structures and Algorithms (3 crs.)

Static, semistatic, and dynamic data structures. Techniques for the analysis and design of efficient algorithms which act on data structures. Topics will include arrays, records, stacks, queues, deques, linked lists, trees, graphs, sorting and searching algorithms, algorithms for insertion and deletion, and the analysis and comparison of algorithms. *(Prerequisite: CS 102) Either semester*

CS 336 File Processing and Business Applications (4 crs.)

Common business programs and techniques for writing these programs are covered. SEQUENTIAL, ISAM, and RELATIVE file organizations are discussed and used in business-oriented programs. *(Prerequisite: CS 201 and CS 330) Either semester*

CS 338-339 Honors Tutorial (3 crs. each semester)

Special topics in Computer Science. Open to All-College and Departmental Honors students. Three hourly meetings weekly. *(Prerequisite: consent of the department) CS 338 fall semester, CS 339 spring semester*

CS 340 Organization of Programming Languages (3 crs.)

An introduction to the structure of programming languages. Formal specification of syntax and semantics; structure of algorithmic, list processing, string manipulation, data description,

and simulation languages; basic data types, operations, statement types, and program structure; run-time representation of program and data. Particular emphasis placed on block-structured languages (ALGOL-68, Pascal, Ada, C) and interpreted languages (APL, LISP, SNOBOL). Programming assignments made in several languages. *(Prerequisite: CS 201, MA 130, CS 330) Either semester.*

CS 345 Compiler Construction (3 crs.)

Compiler structure; lexiysis, syntax analysis, grammars, description of programming language, automatically constructed recognizers, and error recovery; semantic analysis, semantic languages, semantic processes, optimization techniques, and extendible compilers. Students will write a sample compiler. *(Prerequisites: CS 330 and CS 340) Offered alternate years*

CS 350 Operating Systems (3 crs.)

Discussion of the organization and structure of operating systems for various modes of computer use from simple batch systems to time-sharing/multiprocessing systems. Topics include concurrent processing, memory management, deadlock, file systems, scheduling, etc. Programming assignments made in a high-level language with concurrent processing feature. *(Prerequisite: CS 206, CS 330) Either semester*

CS 395 Computer Science Seminar (3 crs.)

Interdisciplinary uses of computers. Problems arising through the increasing use of computers in our society. Seminar will be project oriented and students will present their work to the class for discussion and criticism. *(Prerequisite: a minimum of 24 approved hours in computer science and consent of the department) Spring semester*

CS 399 Topics in Theoretical Computer Science (3 crs.)

Topics to be selected from: artificial intelligence, automata theory, computational complexity theory, mathematical linguistics, programming language theory, and other theoretical computer science topics. *(Prerequisite: consent of the instructor) Fall semester*

CS 405 Introduction to Database Systems (3 crs.)

Physical data organization. The hierarchical, network, and relational data models. Design theory for relational data base; data dependencies, normal forms, and preventing loss of information. Query optimization. Integrity and security of data bases. Students implement applications on a relational data base system. *(Prerequisites: MA 130 and CS 330) Offered alternate years.*

CS 410 Database Applications (3 crs.)

The role of a database in an MIS environment is studied. Team analysis and implementation of a database project will be a major course component. This course does not fulfill computer science major requirements.

CS 430 Computer Networks (3 crs.)

Introduction to data transmission, digital multiplexing, and data switching, characteristics of transmission media, terminals, modems, and communication processes; design of error control, line control, and information flow control procedures; study of message and packet switching networks; protocols and software in packet switching systems; and modelling techniques for networks. *(Prerequisite: CS 330)*

Mathematics and Computer Science

CS 435 Analysis of Algorithms (3 crs.)

General overview of algorithms. Algorithmic techniques needed in problem solving. Relative efficiency of algorithms. Topics will include efficient algorithms for data manipulation, graphical analysis, rapid evaluation of algebraic functions and matrix operations, and $N \log N$ bound in sorting algorithms. (Prerequisite: CS 330) Offered alternate years, fall semester

CS 436 Computer Graphics (3 crs.)

This course includes an introduction to hardware, algorithms, and software of computer graphics. Topics include line generators, affine transformations, line and polygon clipping, splines, interactive techniques, menus, orthographic and perspective projections, solid modeling, hidden surface removal, lighting models and shading. (Prerequisites: CS 330 and either MA 120 or MA 202) Fall semester

CS/MA 445 Logic Programming (3 crs.)

The study of propositional and first order predicate logic from an axiomatic point of view. Algorithmic methods of theorem proving will be emphasized. (Prerequisite: junior or senior mathematics or computer science major or equivalent background, and consent of the department) Fall semester

CS/MA 460 Introduction to Robotics (3 crs.)

An introduction to the theory of the motion of robot manipulators. The mathematics, programming and control of manipulators will be emphasized. Also examined will be issues of sensing and planning. (Prerequisite: CS 102 and either MA 152 or MA 142, and MA 202 or MA 120) Spring semester

CS 470 Introduction to Artificial Intelligence (3 crs.)

This course introduces students to the basic concepts and techniques of artificial intelligence. Emphasis is given to representation and the associated data structures. Students will also be introduced to an AI language such as LISP. (Prerequisite: 24 credits in approved computer science courses for computer science majors) Fall semester

CS 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the Departmental Honors Committee and the thesis director this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Departmental Honors Committee. Either semester

CS 498 Internship in Computer Science (3 crs.)

Students will work for an employer in the computer science field for a minimum of 10 hours/week during one full semester. A member of the department will serve as adviser and evaluator of all work projects. This course can be taken only once for credit. (Prerequisite: A minimum of 24 approved hours in computer science and permission of the department; formal application required) Either semester

CS 499 Directed Study in Computer Science (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: consent of the department; formal application required) Either semester

Other Approved Courses:

CS 280 Fundamentals of Microprocessors and Microcomputers

CS 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details consult the paragraph entitled "Independent Study" in the Graduate School section of this catalog.

CS 510 Topics in Programming Languages (3 crs.)

This course investigates programming language development from designer's, user's and implementor's point of view. Topics include formal syntax and semantics, language system, extensible languages, and control structures. There is also a survey of intralanguage features, covering ALGOL-60, ALCOL-68, Ada, Pascal, LISP, SNOBOL-4 APL, SIMULA-67, CLU, MODULA, and others. (Prerequisite: consent of the instructor)

CS 520 Operating Systems Principles (3 crs.)

This course examines design principles such as optimal scheduling; file systems, system integrity and security, as well as the mathematical analysis of selected aspects of operating system design. Includes: queuing theory, disk scheduling, storage management and the working set model. Design and implementation of an operating system nucleus is also studied. (Prerequisite: consent of the instructor)

CS 525 Design and Construction of Compilers (3 crs.)

Topics include lexical and syntactic analysis; code generation; error detection and correction; optimization techniques; models of code generators; incremental and interactive compiling. Students design and implement a compiler (Prerequisite: consent of the instructor)

CS 530 Software Engineering (3 crs.)

Topics include construction of reliable software, software tools, software testing methodologies, structured design, structured programming, software characteristics and quality and formal proofs of program correctness. Chief programmer teams and structure walk-throughs will be employed. (Prerequisite: consent of the instructor)

CS 536 Graphics (3 crs.)

This course examines typical graphics systems, both hardware and software. Topics include design of low level software support for raster and vector displays, three-D surface and solids modeling, hidden line and hidden surface algorithms. Shading, shadowing, reflection, refraction, and surface texturing. (Prerequisite: consent of the instructor)

School of Arts and Sciences

CS 540 Automata, Computability, and Formal Languages (3 crs.)

Topics include finite automata and regular languages, context-free languages, Turing machines and their variants, partial recursive functions and grammars, Church's thesis, undecidable problems, complexity of algorithms, and completeness. (*Prerequisite: consent of the instructor*)

CS 545 Analysis of Algorithms (3 crs.)

This course deals with techniques in the analysis of algorithms. Topics to be chosen from among: dynamic programming, search and traverse techniques, backtracking, numerical techniques, NP-hard and NP-complete problems, approximation algorithms, and other topics in the analysis and design of algorithms. (*Prerequisite: consent of the instructor*)

CS 550 Topics in Discrete Mathematics (3 crs.)

Topics include context-free languages, graph theory, combinatorics, optimization theory, linear programming, error correcting codes. (*Prerequisite: consent of the instructor*)

CS 560 Artificial Intelligence (3 crs.)

This course is an introduction to LISP or another AI programming language. Topics are chosen from: pattern recognition, theorem proving, learning, cognitive science, vision. It also presents introduction to the basic techniques of AI such as: heuristic search, semantic nets, production systems, frames, planning, and other AI topics. (*Prerequisite: consent of the instructor*)

CS 562 Expert Systems (3 crs.)

Architectures currently used in building expert systems are studied. The main current systems are surveyed along with expert system environments and tools. (*Prerequisite: CS 560*)

CS 565 Logic Programming (3 crs.)

This course is an introduction to first order predicate logic as a problem solving tool. Logic programming languages such as PROLOG are studied along with applications of logic programming to mathematics fields, natural language processing, and law. (*Prerequisite: consent of the instructor*)

CS 570 Robotics (3 crs.)

This is a project-oriented course in robotics. Topics are chosen from: manipulator motion and control, motion planning, legged-motion, vision, touch sensing, grasping, programming languages for robots, automated factory design. (*Prerequisite: consent of the instructor*)

CS 575 Natural Language Processing (3 crs.)

This is a historical survey of question-answering systems. Topics include analysis and computational representation of syntactic and semantic structures for artificial intelligence application using English; current text systems; simulation of brief systems and other aspects of cognition; use of natural language systems; generation of text or speech. (*Prerequisite: CS 560*)

CS 580 Database Systems (3 crs.)

Topics include relational, hierarchical and network data models; design theory for relational databases and query optimization; classification of data models, data languages; concurrency, integrity, privacy; modelling and measurement of access strategies; dedicated processors, information retrieval, real time applications. (*Prerequisite: consent of the instructor*)

CS 582 Distributed Database Systems (3 crs.)

The problems inherent in distributed data bases on a network of computer systems are studied including file allocation, directory systems, deadlock detection and prevention, synchronization, query optimization, and fault tolerance. (*Prerequisite: CS 580*)

CS 590 Computer Architecture (3 crs.)

This course is an introduction to the internal structure of digital computers including: design of gates, flipflops, registers and memories to perform operations on numerical and other data represented in binary form; computer system analysis and design; organizational dependence on computations to be performed; theoretical aspects of parallel and pipeline computation. (*Prerequisite: consent of the instructor*)

CS 594 Computer Networks (3 crs.)

This course is an introduction to data transmission, digital multiplexing, and data switching. Topics include characteristics of transmission media, terminals, modems, and communication processes; design of error control, line control, and information flow control procedures; study of message and packet switching networks; protocols and software in packet switching systems; and modelling techniques for networks. (*Prerequisite: consent of the instructor*)

CS 596 Topics in Computer Science (3 crs.)

Topics are chosen from: program verification, formal semantics, formal language theory, concurrent programming, complexity or algorithms, programming language theory, graphics, and other computer science topics. (*Prerequisite: consent of the instructor*)

CS 599 Computer Science Seminar (3 crs.)

A project oriented seminar in computer science. Projects will be individually assigned. (*Prerequisite: minimum of 12 credits in 500-level science course work*)

Department of Music

Faculty

Chairperson: Professor Maxine Asselin
Professors: Ian Johnstone, Jacob Liberles, Henry Santos
Associate Professors: David Garcia, Jean Kreiling

Undergraduate Programs

Bachelor of Arts

The Music Department offers a major within the framework of a Bachelor of Arts degree. By providing a solid foundation in music history, theory, and performance within a liberal arts context, the program prepares students to pursue a variety of academic and professional interests, including graduate study in music.

In addition, the Music Department offers a minor for the student pursuing a B.A. or B.S. degree, as well as courses that satisfy the General Education Requirements. Private instruction is given in piano, guitar, voice and orchestral and band instruments; an additional fee is charged for these lessons. Performing organizations are also available for both singers and instrumentalists.

A student wishing to major or minor in music should consult with the department chairperson as early as possible. ~~Certain courses may be waived pending~~ consultation with the Music Department chairperson and/or completion of proficiency tests.

Music Major

A student majoring in music must earn 36 credits by combining required courses and electives. The required core courses are designed to develop competence in theory, history, musicianship, and performance:

MU 171 Music Theory I
 MU 172 Music Theory II
 MU 240 Class Piano II
 MU 261 Music History I
 MU 262 Music History II
 MU 270 Sight-singing and Ear-training I

5 credits in ensembles (MU 112, 113, 114, 115, 118, 119, 183)

4 credits in performance studies (MU 121-126, 131, 141, 221-226, 231, 241, 321-326, 331, 341, 421-426, 431, 441)

School of Arts and Sciences

Elective credits must be chosen from among the following:

MU 230 Voice Class II
MU 251 Conducting
MU 255 Music Materials for Elementary Teachers
MU 274 Creating Music
MU 355 Creative Activities in Elementary School Music
MU 361 Forces in Modern American Music: Jazz
MU 364 Music of the Classical and Romantic Periods
MU 370 Sight-singing and Ear-training II
MU 371 Counterpoint
MU 372 Form and Analysis of Music
MU 373 Composing I
MU 374 Composing II
MU 473 Composing III
MU 474 Composing IV
MU 453 Music for Early Childhood
MU 499 Directed Study in Music

Double Major with Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in Music and Elementary Education, Early Childhood Education or Special Education for certification purposes. Appropriate advising materials with suggested course sequences are available.

Music Minor

Required courses:

MU 140 Class Piano I
MU 171 Music Theory I
MU 261 Music History I
or
MU 262 Music History II
MU 270 Sight-singing and Ear-training I
or
MU 370 Sight-singing and Ear-training II
3 credits in ensembles (MU 112, 113, 114, 115, 118, 119, 183)

Six additional credits from among the following:

Performance Studies (MU 121-126, 131, 141, 221-226, 231, 241, 321-326, 331, 341, 421-426, 441) (maximum of 4 crs.)
MU 130 Voice Class I
or
MU 230 Voice Class II
MU 162 Music in African Culture

MU 167 The Music of Black Americans
MU 172 Music Theory II
MU 240 Class Piano II
MU 261 Music History I
or
MU 262 Music History II
MU 274 Creating Music
MU 364 Music of the Classical and Romantic Periods
MU 370 Sight-singing and Ear-training II
MU 371 Counterpoint
MU 372 Form and Analysis of Music
MU 399 Special Topics in Music
MU 499 Directed Study in Music

Graduate Programs

The Department of Music offers courses which may be taken for graduate credit in the Master of Arts in Teaching and CAGS programs in Creative Arts. These courses should be selected in consultation with an adviser and/or the Music Department chairperson.

For more detailed information regarding this program contact the Music Department and the Graduate School Office.

Courses at the 100 and the 200 level, as well as MU 499 Directed Study in Music, may not be taken for graduate credit.

Course Offerings*

‡MU 112 Wind Ensemble (1 cr.)

The wind ensemble is open to any student who plays a woodwind, brass, or percussion instrument. The wind ensemble performs significant literature which is selected to stimulate both the musicians and the audience. The course may be repeated for credit. *Either semester*

‡MU 113 Jazz Band (1 cr.)

The jazz band is open by audition and limited to twenty musicians who wish to perform in the big band style. Performances provide the student with an opportunity to apply musical skills acquired through practice and rehearsal. The course may be repeated for credit. *Either semester*

‡MU 115 Instrumental Ensemble (1 cr.)

A mixed group of instrumentalists that studies and performs appropriate works. Ensembles formed as interest indicates. Course may be repeated for credit. *Either semester*

‡MU 118 Chorale (1 cr.)

A group of mixed voices which studies and performs compositions representative of various styles, periods, and cultures. Performances presented throughout the academic year often include major works with orchestral accompaniment. The course may be repeated for credit. *(Prerequisite: consent of the instructor) Either semester*

‡MU 119 Vocal Ensemble (1 cr.)

A select group of mixed voices which studies and performs chamber vocal music representative of various styles, periods and cultures. This a cappella ensemble represents the college both in the United States and abroad. The course may be repeated for credit. *(Prerequisite: consent of the instructor) Either semester*

MU 121, 221, 321, 421 Performance Studies I, II, III, IV (Private Lessons - Brass) (1 cr.)

The sequence provides private instruction for those students who wish to improve their proficiency in playing brass instruments. The material is selected according to the ability of the student. The lessons are for a one hour period per week. The course may be repeated for credit. Additional fee required. *(Prerequisite: consent of the instructor; placement level determined by the Instructor) Either semester*

‡ From MU 112, 113, 115, 118, 119 and 183, and from any and all co-curricular activities in which a student might wish to participate and for which the college grants or may decide to grant credit in the future, a student may accumulate not more than one (1) credit per semester, nor more than two (2) per year, nor more than six (6) per college career.

Exception: All one credit co-curricular and physical education activity courses that are required for officially enrolled and graduating students in an approved major, concentration or minor may be counted towards graduation.

*See pages 75-76 for information regarding course offerings.

MU 122, 222, 322, 422 Performance Studies I, II, III, IV (Private Lessons - Percussion) (1 cr.)

The sequence provides private instruction for those students who wish to improve their proficiency in playing percussion instruments. The material is selected according to the ability of the student. The lessons are for a one hour period per week. The course may be repeated for credit. Additional fee required. *(Prerequisite: consent of the instructor; placement level determined by the Instructor) Either semester*

MU 123, 223, 323, 423 Performance Studies I, II, III, IV (Private Lessons - Violin, Viola) (1 cr.)

The sequence provides private instruction for those students who wish to improve their proficiency in playing upper string instruments. The material is selected according to the ability of the student. The lessons are for a one hour period per week. The course may be repeated for credit. Additional fee required. *(Prerequisite: consent of the instructor; placement level determined by the Instructor) Either semester*

MU 124, 224, 324, 424 Performance Studies I, II, III, IV (Private Lessons - Woodwinds) (1 cr.)

The sequence provides private instruction for those students who wish to improve their proficiency in playing woodwind instruments. The material is selected according to the ability of the student. The lessons are for a one hour period per week. The course may be repeated for credit. Additional fee required. *(Prerequisite: consent of the instructor; placement level determined by the Instructor) Either semester*

MU 125, 225, 325, 425 Performance Studies I, II, III, IV (Private Lessons - Classical Guitar) (1 cr.)

The sequence provides private instruction for those students who wish to improve their proficiency in playing the instrument. The material is selected according to the ability of the student. The lessons are for a one hour period per week. The course may be repeated for credit. Additional fee required. *(Prerequisite: consent of the instructor; placement level determined by Instructor) Either semester*

MU 126, 226, 326, 426 Performance Studies I, II, III, IV (Private Lessons - Cello, Bass) (1 cr.)

The sequence provides private instruction for those students who wish to improve their proficiency in playing lower string instruments. The material is selected according to the ability of the student. The lessons are for a one hour period per week. The course may be repeated for credit. Additional fee required. *(Prerequisite: consent of the instructor; placement level determined by the Instructor) Either semester*

MU 130 Voice Class I (3 crs.)

Through the performance of songs of different nationalities, the student gains knowledge of basic vocal technique, general musicianship and terminology. Satisfies the GER in Artistic Modes of Expression (studio course). *Either semester*

School of Arts and Sciences

MU 131, 231, 331, 431 Performance Studies I, II, III, IV (Private Lessons - Voice - Singing) (1 cr.)

The sequence provides private instruction for those students who wish to improve their ability in singing. The material is selected according to the ability of the student. The lessons are for a one hour period per week. The course may be repeated for credit. Additional fee required. (Prerequisite: consent of the instructor; placement level determined by the Instructor) Either semester

MU 140 Class Piano I (3 crs.)

Through the performance of compositions by master composers and arrangements of symphonic literature, folk songs, spirituals, seasonal and patriotic songs, the beginning piano student learns basic piano technique, elementary theory, general musicianship, terminology and the different stylistic periods in music. Satisfies the GER in Artistic Modes of Expression (studio course). Either semester

MU 141, 241, 341, 441 Performance Studies I, II, III, IV (Private Lessons - Piano) (1 cr.)

The sequence provides private instruction for those students who wish to improve their ability at the keyboard. The material is selected according to the ability of the student. The lessons are for a one hour period per week. The course may be repeated for credit. Additional fee required. (Prerequisite: consent of the instructor; placement level determined by the Instructor) Either semester

MU 150 Classroom Music (3 crs.)

An integrated approach to the use of music in the elementary school which serves to enhance the student's knowledge and ability to use music in the classroom. Either semester

MU 160 Music: A Listening Approach (3 crs.)

This course, designed for students with no previous musical training, explores art music of the Western world and gives the beginner the knowledge and skills necessary for more informed listening. Music surveyed may include symphonies, concerti, songs, operas, and other works, from various historical periods. Satisfies the GER in Artistic Modes of Expression. Either semester

MU 161 American Music of the Twentieth Century (3 crs.)

This course surveys the history and development of American music in the twentieth century. American composers, musical philosophers, performers, and conductors will be studied. Satisfies the GER in Artistic Modes of Expression. Spring semester

MU 162 Music in African Culture (3 crs.)

This course surveys the musical traditions of Africa with respect to their historical, social and cultural backgrounds. Musical organizations, instrumental and vocal techniques and important aspects of style are treated. Satisfies the GER in Non-Western Civilization. Either semester

‡ From MU 112, 113, 115, 118, 119 and 183, and from any and all co-curricular activities in which a student might wish to participate and for which the college grants or may decide to grant credit in the future, a student may accumulate not more than one (1) credit per semester, nor more than two (2) per year, nor more than six (6) per college career.

Exception: All one credit co-curricular and physical education activity courses that are required for officially enrolled and graduating students in an approved major, concentration or minor may be counted towards graduation.

MU 163 Music of the Non-Western World (3 crs.)

This course is an introductory survey of selected Non-Western musical traditions including those of Asia, Latin America, Oceania and the Middle East. Topics include song and dance styles, musical instruments, social context and function of performance genres, musical structures, traditional vs. modern styles, and aesthetic principles. Satisfies the GER in Non-Western Civilization.

MU 167 The Music of Black Americans (3 crs.)

This course surveys the history of black American music. The contribution of the African-American style to the European-based music tradition will be stressed. Satisfies the GER in Artistic Modes of Expression. Fall semester

MU 170 Music Fundamentals (3 crs.)

A course designed for beginners who wish to develop music literacy. Pitch, rhythm, chords, and major and minor scales are among the topics studied. Evaluations are based on both written work and musical performance. Satisfies the GER in Artistic Modes of Expression. Either semester

MU 171 Music Theory I (3 crs.)

Beginning harmony and counterpoint: writing in small forms and chorale harmonizations, written exercises, ear training and keyboard work. (Prerequisite: MU 140, MU 170, or consent of the instructor) Fall semester

MU 172 Music Theory II (3 crs.)

A continuing technical course in the study of 18th and 19th century harmony. Topics studied include seventh chords through chords of the augmented sixth, figured bass, analysis, harmonization of melody, and counterpoint. (Prerequisite: MU 171 or consent of the instructor) Spring semester

‡MU 183 String Ensemble (1 cr.)

The String Ensemble is open by audition to all students of the college. The group performs standard and contemporary chamber music selected to showcase the strengths of the ensemble. The course may be repeated for credit. Either semester

MU 230 Voice Class II (3 crs.)

A continuation of Voice Class I, dealing with further development of singing technique and including class performances of different vocal styles represented by literature from various periods. (Prerequisite: MU 130 or consent of the instructor) Spring semester

MU 240 Class Piano II (3 crs.)

The continuation of Class Piano I presents a detailed study of works from the Baroque to the Contemporary periods. The student gains facility in the art of phrasing, use of dynamics and attention to tempos. Satisfies the GER in Artistic Modes of Expression (studio course). Either semester‡

MU 251 Conducting (3 crs.)

Designed for the beginning choral or instrumental conductor, this course includes basic conducting patterns, score reading and analysis, baton and rehearsal techniques. (Prerequisite: MU 170 or consent of the instructor)

MU 255 Music Materials for Elementary Teachers (3 crs.)

For those who wish to become more actively involved with music in the classroom. Includes singing, use of instruments, listening, reading music, and rhythmic activity. *(Prerequisite: MU 150, MU 170, or consent of the instructor)* Spring semester

MU 261 Music History I (3 crs.)

An historical and technical survey of music of the Middle Ages through the Baroque period, with emphasis on the changing musical language, the various social and cultural roles of composition and performance, and the history of musical styles. *(Prerequisite: MU 171)* Fall semester

MU 262 Music History II (3 crs.)

An historical and technical survey of music of the Classical Era through the present day. Continues Music History I, with emphasis on the changing musical language, the various social and cultural roles of composition and performance, and the history of musical styles. *(Prerequisite: MU 172)* Spring semester

MU 270 Sight-singing and Ear-training I (3 crs.)

This course raises the level of competency in music reading, dictation of musical examples and singing music at first sight through graded solfege and ear training exercises. *(Prerequisite: MU 140 or 170 or consent of the instructor)* Fall semester

MU 274 Creating Music (3 crs.)

An exploration and organization of the many sounds around us to create music. Skills in performance and knowledge of music fundamentals are utilized and continually developed. All creative endeavors are performed, discussed and evaluated in class. *(Prerequisite: MU 170 or consent of the instructor)* Spring semester

MU 355 Creative Activities in Elementary School Music (3 crs.)

Practical experience offered in free and directed rhythmic responses, use of melody, percussion and chording instruments, use of the piano, and singing activities. *(Prerequisite: MU 150, MU 170, or consent of the instructor)*

MU 361 Forces in Modern American Music: Jazz (3 crs.)

The course will trace the development of Jazz from African, European, Caribbean, and other world sources. Styles, performers, and listening strategies will be studied.

MU 364 Music of the Classical and Romantic Periods (3 crs.)

An in-depth study of music of the Classical and Romantic eras, focusing on the history and styles of the symphony, sonata, song, string quartet, opera, and other genres. *(Prerequisite: MU 262)*

MU 370 Sight-singing and Ear-training II (3 crs.)

Continues MU 270. Students achieve a high level of fluency by reading graded advanced unison, two-, three-, and four-part studies, as well as combined rhythmic and melodic dictation, and one- and two-part rhythmic exercises for aural proficiency. *(Prerequisite: MU 270 or consent of the instructor)*

MU 371 Counterpoint (3 crs.)

An analytical and practical exploration of melodic and contrapuntal techniques, relying upon extensive student exercises in composition and singing; emphasis on styles of the sixteenth through the eighteenth centuries. *(Prerequisite: MU 172)*

MU 372 Form and Analysis of Music (3 crs.)

Advanced analysis of the harmony, rhythm, melody, texture, and structure of selected works of music. *(Prerequisite: MU 172)*

MU 373, 374, 473, 474 Composition I, II, III, IV (3 crs. each)

A technical and practical exploration of the materials and methods of musical composition centered around the students' own creative exercises. *(Prerequisite: MU 172)*

MU 399 Special Topics in Music (3 crs.)

A topic of special interest to faculty and/or students will be explored; emphasis may be on history, theory, or performance. This course may be taken more than once.

MU 453 Music for Early Childhood (3 crs.)

Designed for elementary education students, teachers and those interested in primary grades. The study of music as it relates to the developmental process of children of nursery, kindergarten and primary grades. Program planning, activities and materials which help promote musical growth in children and music skills for the teacher. Special attention is given to singing, listening and use of recorded materials. *(Prerequisite: consent of the instructor)*

MU 499 Directed Study in Music (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. *(Prerequisite: consent of the department)* Either semester

Other Approved Courses:

MU 117 Women's Glee Club

MU 320 Class Recorder

MU 368 Folk Music of Canada

MU 413 Advanced Choral Conducting

MU 456 Introduction to Orff-Schulwerk

MU 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

MU 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

MU 511 Advanced Choral Literature (3 crs.)

Study and preparation of music from varied historical style periods with primary emphasis on polychordal music, American composers and Avant Garde music. *(Prerequisite: MU 251 or consent of the instructor)*

MU 512 Contemporary Trends in Choral Literature (3 crs.)

Study and preparation of the newest styles and techniques of current choral composers ranging from spoken chorus to choral dramatics. *(Prerequisite: MU 251 or consent of the instructor)*

School of Arts and Sciences

MU 552 Seminar in Music Education Problems (3 crs.)

After current problems in the music education field have been recognized and analyzed, an attempt will be made to arrive at reasonable solutions which are educationally and musically sound. (*Prerequisite: MU 251 or consent of the instructor*)

MU 554 Research in Music Education (3 crs.)

Sources, methods and types of research used in scholarly inquiry, including techniques used in planning and conducting a survey.

MU 561 Music and Communication (3 crs.)

Critical approaches to music and its relation to the other arts and ideas. Consideration of the meanings, effects, and aesthetics of music. (*Prerequisite: MU 262 or consent of the instructor*)



Department of Philosophy

Faculty

Chairperson: Professor Francine Quaglio

Professors: David Cheney, Robert Fitzgibbons,
Edward James, Steven Sanders

Philosophical inquiry aims at clear, logical, critical thinking about a variety of perennial human concerns. These include questions about values, the nature of knowledge and truth, the meaning of life, the understanding of experience, the possibility of religious knowledge, and many others. The department offers courses in the main problems of philosophy, the history of philosophy, and the methods of philosophy as a mode of critical thinking.

Undergraduate Programs

Bachelor of Arts

The department offers a major in Philosophy which provides a solid foundation for entry into diverse careers and/or prepares the student for graduate work in philosophy and related disciplines. The nature of philosophical inquiry and its methods of critical thinking are particularly suited to the fields of law, education, and public policy.

Philosophy Major

A minimum of ten philosophy courses (30 credits). A grade of "C" or higher is required in all philosophy

course work contributing to the major. Majors intending to pursue a graduate degree in philosophy should develop proficiency in either French or German.

Satisfactory completion of at least one course in each of the following core areas - logic, epistemology, ethics, and philosophy of mind - is required and will normally be satisfied by the following courses:

PL 401 Symbolic Logic
PL 402 Theories of Knowledge
PL 403 Theories of Ethics
PL 404 Theories of Mind

Satisfactory completion of at least one of the following courses in the history of philosophy is required:

PL 301 Plato and Aristotle
PL 302 Descartes, Hume, and Kant
PL 303 Hegel and Continental Thought
PL 304 Contemporary Anglo-American Philosophers

School of Arts and Sciences

Applied Ethics Concentration

Fulfill requirements for philosophy major with the following distribution.

At least four of the following:

- PL 202 Practical Reasoning
- PL 203 Happiness and the Meaning of Life
- PL 204 Sex and Personal Relations
- PL 205 Medical Ethics
- PL 206 Media Ethics
- PL 210 Liberation Ethics
- PL 322 Philosophy of Law
- PL 330 Amoralism, Egoism, and Altruism
- PL 334 Free Will, Determinism, and Responsibility

Philosophy Minor

For a minor in philosophy, a student must complete six philosophy courses (18 credits). Interested students should contact the chairperson in order to discuss an individual program relevant to their academic majors.

Double Majors

Interested students, particularly those majoring in education, should contact the chairperson in order to discuss an individual program.

Graduate Programs

The department does not currently offer a graduate program. However, philosophy courses at the 300 and 400 level, with the exception of PL 499, may be taken for graduate credit with the consent of the department of Philosophy.



Course Offerings*

Only one course from the following may be taken for credit:

- PL 101 Reasoning and Value
- PL 102 Reasoning and Human Nature
- PL 103 Reasoning and Politics
- PL 104 Reasoning and Religion
- PL 105 Reasoning and Science

PL 101 Reasoning and Value (3 crs.)

This course introduces the skills of critical reasoning by developing a general understanding of argumentation and by examining key philosophical issues concerning morality, such as: What is morality? Are there any universal values or principles which all persons should recognize? Are there any rational ways to resolve moral disagreements? Satisfies the GER in Philosophy. *Either semester*

PL 102 Reasoning and Human Nature (3 crs.)

This course introduces the skills of critical reasoning by developing a general understanding of argumentation and by examining key philosophical issues concerning human nature, such as: What is a person? Is there a human nature? Are human acts free or determined? Satisfies the GER in Philosophy. *Either Semester*

PL 103 Reasoning and Politics (3 crs.)

This course introduces the skills of critical reasoning by developing a general understanding of argumentation and by examining key philosophical issues concerning politics, such as: What, if anything, is the legitimate purpose of government? What is the best form of government? To what extent, if any, are we obligated to obey the law? What are rights and how do we get them? Satisfies the GER in Philosophy. *Either semester*

PL 104 Reasoning and Religion (3 crs.)

This course introduces the skills of critical reasoning by developing a general understanding of argumentation and by examining key philosophical issues concerning religion, such as: Can God's existence be proven or disproven? Can the existence of evil be an obstacle to religious belief? Is there evidence for immortality? Can an atheist be moral? Satisfies the GER in Philosophy. *Either semester*

PL 105 Reasoning and Science (3 crs.)

This course introduces the skills of critical reasoning by developing a general understanding of argumentation and by examining key philosophical issues concerning science, such as: Is there a scientific method? Are science and faith mutually exclusive? Is there "a scientific view" of persons? Is science value-free? Satisfies the GER in Philosophy. *Either semester*

PL 135-136 Freshman Honors Colloquium (1 cr. each semester)
Freshman Honors Colloquia in Philosophy allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) PL 135 fall semester, PL 136 spring semester

All philosophy courses above the 100 level will normally have a prerequisite of one 100 level course in philosophy.

PL 201 Rational Thinking (3 crs.)

This course develops skills of rational thinking, including a working understanding of meaning, ambiguity, and vagueness; the nature of argument; deductive and probabilistic reasoning; and fallacies. *Offered alternate years*

PL 202 Practical Reasoning (3 crs.)

This basic skills course is designed to help the student in the areas of organizing ideas and reasoning about matters of practical interest, including strategies for dealing with disagreements; planning for goals and the future; resolving interpersonal conflicts of interest. Emphasis will be placed on in-class case analysis and problem solving involving editorials, advertising, statistics, cause-and-effect reasoning, and emotive language. *Offered alternate years*

PL 203 Happiness and the Meaning of Life (3 crs.)

This course provides a framework for thinking about happiness and life's meaning by considering such questions as: What is happiness and how can it be attained? Is happiness the main, or only, goal in living a good life? Does life have a meaning? Is living morally a condition of having a good life? How are happiness and life's meaning affected by emotion, desire, reason, pleasure, suffering and death? *Offered alternate years*

PL 204 Sex and Personal Relations (3 crs.)

This course examines central topics in the philosophy of sex including questions such as: What is the philosophical significance of sex? Can we justify the distinction between good and bad sex? Moral and immoral sex? Normal and perverted sex? Is the language of sex sexist? What is love and how is it related to reason and emotion? Can friendship be distinguished from love? Does prostitution or pornography degrade persons? *Offered alternate years*

PL 205 Medical Ethics (3 crs.)

This course explores issues of life and death including questions such as: Is abortion ever justified? Is euthanasia ever justified? Does the patient ever have the right to refuse life-saving treatment? Does a doctor have the right to withhold information from patients? Do the parents or the society have the right to determine what is the best treatment, if any, for a child? Is suicide ever justifiable? On what basis should limited medical resources be allocated? *Offered alternate years*

*See pages 75-76 for information regarding course offerings.

School of Arts and Sciences

PL 206 Media Ethics (3 crs.)

This course explores ethical issues arising out of the relations between art, communications, and business, including questions such as: What is media bias and is it unavoidable? Can there be such a thing as objective reporting? Do advertising, packaging, and product design make informed choice more likely? Is there an ethics for advertising? Should the media ever be censored? Do artists, journalists, and others in the media have specific rights and responsibilities? *Offered alternate years*

PL 210 Liberation Ethics (3 crs.)

This course considers the ethics of liberation as it relates primarily to "third-world" peoples, drawing upon such thinkers as Gandhi, Mao, Weil, Fanon, King, and Mandela. Emphasis will be placed on such issues as the meaning of "third-world," the legitimacy of revolution, rebellion, civil disobedience or reparation, and the status of disenfranchised groups, including women and African-Americans. Satisfies the GER in Non-Western Civilization. *Offered alternate years*

PL 212 Philosophies of India (3 crs.)

This course examines some of the central ideas and issues found in past and contemporary Vedanta, Yoga, and Buddhism, especially as they illuminate Asian/Western misunderstanding and relationships. Emphasis will be placed on concepts of moral value, human nature, salvation, harmony, and pluralism. Satisfies the GER in Non-Western Civilization. *Offered alternate years*

PL 213 Philosophies of China and Japan (3 crs.)

This course examines some of the central ideas and issues found in past and contemporary Confucianism, Taoism, Buddhism and Shintoism, especially as they illuminate Asian/Western misunderstandings and relationships. Emphasis will be placed on concepts of moral value, human nature, salvation, harmony, and pluralism. Satisfies the GER in Non-Western Civilization. *Offered alternate years*

PL 286-287 Sophomore Honors Colloquium (1 cr. each semester)
Sophomore Honors Colloquia in Philosophy allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) PL 286 fall semester, PL 287 spring semester

PL 301 Plato and Aristotle (3 crs.)

This course examines selected works of Plato and Aristotle on such issues as the nature of philosophy, the method of inquiry, the ground and possibility of knowledge, the reality of form and psyche, deliberation and human good, and the ideal society. *Offered alternate years*

PL 302 Descartes, Hume, and Kant (3 crs.)

This course examines selected works of Descartes, Hume, and Kant on such issues as the possibility of knowledge, the scope and limits of reason, the nature of the self and the relation between mind and body, the nature of space, time, and causality, the status of theological and metaphysical claims, and the foundations of morality. *Offered alternate years*

PL 303 Hegel and Continental Thought (3 crs.)

This course examines Hegel's systematic philosophy, including his accounts of dialectical progression; forms of consciousness, culture and conceptual framework; freedom and rationality; individual and collective life; followed by consideration of selected works of modern European thinkers responding to Hegel, such as Marx, Nietzsche, and Heidegger. *Offered alternate years*

PL 304 Contemporary Anglo-American Philosophers (3 crs.)

This course examines selected works of philosophers such as Pierce, James, Dewey, Whitehead, Russell, Moore, Austin, Wittgenstein, and Popper on such topics as the extent and limits of rationality, the structure of empirical knowledge, the relations between language and the world and between thought and action, and the nature of meaning, truth, and justification. *Offered alternate years*

PL 322 Philosophy of Law (3 crs.)

This course examines law and justice, the structure of legal reasoning, the nature and justification of the adversary system, lawyers' roles and ethics, and questions such as: Should confidentiality, zealous advocacy, plea bargaining, or the insanity defense be abolished? Is punishment morally defensible? What is the basis for legal interference with individual liberty? Do lawyers have an obligation to defend clients they find repulsive? *Offered alternate years*

PL 325 Philosophy of Art (3 crs.)

This course examines philosophical questions arising in connection with the identification, interpretation, and evaluation of art and its creation, and questions such as: What is art? Is there a valid way to distinguish art from non-art and good art from bad art? Are there ways to establish the meaning of a work of art, or is all interpretation subjective? Do artists have moral responsibilities as artists? Should the government subsidize art? *Offered alternate years*

PL 326 Philosophy of Science (3 crs.)

This course begins with an historical survey of the main issues and theories of the concept of science, followed by contemporary views on such questions as: Is the "scientific method" a myth? Is science superior to poetry, art, and religion in giving us truth? Do the terms of science, like "electron," "gene," and "the unconscious" refer to real things? Can we study persons like we study rocks? Can there be feminist ways of looking at science? *Offered alternate years*

PL 328 Philosophy of Religion (3 crs.)

This course critically examines the nature and justification of religious claims, including discussion of: What are the grounds for belief or disbelief in God's existence? Is religious discourse meaningful? Do faith and reason conflict? Is belief in immortality intelligible and/or defensible? Is religious knowledge possible? Are revelation and religious experience reliable sources of truth? Is it rational to believe in miracles? Is atheism a religion? *Offered alternate years.*

PL 330 Amoralism, Egoism, and Altruism (3 crs.)

This course discusses amoralism, egoism, and altruism as alternative life plans, raising such questions as: What is self-interest? Is being an egoist compatible with bonds of trust, friendship, and love? Can we ever be true altruists? Is morality more rational than immorality? Are our ultimate life plans and commitments defensible? Why be moral? *Offered alternate years*

PL 332 Philosophy and Feminist Thought (3 crs.)

This course examines issues in contemporary feminist thought as they have emerged from Western philosophy, such as: Are there distinctively feminist accounts of human nature, society, and persons? Do interpretations of rationality, thought, and experience reflect gender experiences? Do positions on moral issues reflect gender differences? Do feminist theories of gender, culture, and power have social and political applications? Is feminism anti-male? *Offered alternate years*

PL 334 Free Will, Determinism, and Responsibility (3 crs.)

This course examines main topics and problems on the philosophy of action and agency, including: What is free will and do we have it? Are our motives, desires, and intentions determined? When, if at all, are we responsible for what we do? What implications does free will (or its absence) have for autonomy and legal liability, as in the insanity defense? *Offered alternate years*

PL 338-339 Honors Tutorial (3 crs. each semester)

Special topics in Philosophy. Open to All-College and Departmental Honors students. Three hourly meetings weekly. *(Prerequisite: consent of the department)* PL 338 fall semester, PL 339 spring semester

PL 350 Philosophy Seminar (3 crs.)

This course studies a particular philosopher and/or selected philosophical problems. Topics vary; course may be repeated. *(Prerequisite: consent of the instructor)* *Offered alternate years*

PL 401 Symbolic Logic (3 crs.)

This course explores the ideas and techniques of symbolic logic that are of use in understanding, developing, and appraising natural deductive arguments. *Offered alternate years*

PL 402 Theories of Knowledge (3 crs.)

This course begins with an historical survey of the main issues and theories of the concept of knowledge, followed by contemporary views on such questions as: Is rationality rational? Does knowledge need a foundation? Is knowledge the same as truth? Is perception theory-laden? Does evidence reflect gender, power, or culture? *Offered alternate years*

PL 403 Theories of Ethics (3 crs.)

This course begins with an historical survey of the main issues and theories of ethics, followed by contemporary views on such questions as: Does morality have a rational basis? Are there moral truths? Are some persons or cultures better than others? Should moral life be understood in terms of some key concept-like integrity, rights, duties, happiness, or the good life? *Offered alternate years*

PL 404 Theories of Mind (3 crs.)

This course begins with an historical survey of the main issues and theories of the concept of mind, followed by contemporary views on such questions as: What is consciousness? Is it identical to brain states? Could the mind exist apart from the body? Can we know other minds? Could we construct a machine that could think and feel? What is a person and what constitutes personal identity? What is the nature of reason, desire, emotion, and will? *Offered alternate years*

PL 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the Departmental Honors Committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Departmental Honors Committee. *Either semester*

PL 499 Directed Study in Philosophy (1-3 crs.)

This course is open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. *(Prerequisite: consent of the department, formal application required)* *Either semester*

Other Approved Courses:

PL 405 Philosophy of Language

PL 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

PL 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

Department of Physics

Faculty

Chairperson: Professor George Weygand
Professors: Richard Calusdian, Grace Healy, Felix Palubinskas

The Department of Physics strives to provide students with the necessary skills and knowledge to pursue successful careers in research, teaching, or further study in graduate programs. Programs in physics culminating in the degrees of Bachelor of Arts, Bachelor of Science, and Master of Arts in Teaching are offered.

Undergraduate Programs

Bachelor of Arts/ Bachelor of Science

The Department of Physics offers a program leading to the Bachelor's degree in Physics. This program is sufficiently flexible to prepare a student for graduate school, industry, or secondary school teaching. Each student can plan a physics program with the help of a faculty adviser, to meet specific future needs.

Students who are contemplating majoring in this department should be aware of the sequential nature of the course offerings. It is of prime importance that such students consult with the chairperson of the department as soon as possible so that they can complete degree requirements in four years.

The department participates in a number of multidisciplinary programs for students preparing for careers in medicine, dentistry, or oceanography. Additional information on these programs may be found under *Multidisciplinary and Pre-Professional Programs*.

Physics Major

PH 243-244 General Physics I-II
PH 375 Wave Theory
or
PH 385 Optics
PH 387 Modern Physics
PH 388 Electricity and Magnetism
PH 389 Mechanics
PH 403 Mathematical Physics
CH 141-142 Chemical Principles I-II
MA 151-152 Calculus I-II
MA 201 Calculus III
MA 316 Differential Equations
or their equivalent

Physics Minor

18 credits in physics acceptable for the physics major.

Physical Science Minor

18 credits in Physics and Chemistry.

Computer Electronics Concentration

PH 243-244 General Physics I-II
 PH 376 Electronic Circuits
 PH 387 Modern Physics
 PH 388 Electricity and Magnetism
 PH 392 Digital Electronics I
 PH 394 Digital Electronics II
 PH 403 Mathematical Physics
 PH 430 Computer Technology

Plus one of the following:

PH 385 Optics
 PH 386 Optical Electronics
 or
 PH 398 Solid State Electronics

Cognate requirements:

MA 151-152 Calculus I-II
 MA 201 Calculus III
 MA 316 Differential Equations
 CH 141-142 Chemical Principles I-II
 At least six credits in computer science

Computer Electronics Minor

PH 243 General Physics I
 PH 244 General Physics II
 PH 392 Digital Electronics I
 CH/PH 260 Microprocessors-Microcomputer
 Technology
 CH 350 Introduction to Laboratory Automation

Geophysics Minor

A minor is jointly offered with the Department of Earth Sciences and Geography. For further information contact the department chairpersons.

Double Major with Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in Physics and Elementary Education, Early Childhood Education or Special Education for certification purposes. Please contact the Department of Physics and the appropriate education department for further information.

Graduate Programs

Master of Arts in Teaching

The Department of Physics offers programs leading to the degree of Master of Arts in Teaching with concentrations in physics and physical sciences. These programs are designed primarily to meet the varied needs of graduate students who are currently teaching or are planning to teach at the secondary school level. All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the Graduate School section of this catalog. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the *Graduate School* section of this catalog), and a minimum of 18 appropriate graduate credits in the major field (approved by the program adviser on the basis of the background, interests, and needs of the student).

Liberal arts graduates seeking high school teacher certification through the M.A.T. program should consult the *Department of Secondary Education and Professional Programs* section of this catalog for detailed requirements.

The departmental offerings listed below include the following courses which may not be taken for graduate credit:

All physics courses at the 100 and 200 level
 PH 499 Directed Study in Physics

School of Arts and Sciences

Course Offerings*

PH 100 Physics in the Natural World (3 crs.)

This course considers the key scientific concepts underlying physics and how they relate to the environment. Among the topics to be considered are mechanics, heat, electricity, magnetism, optics and sound, modern physics and an historical overview of the physical sciences. This course is suitable for majors other than those in the Physical and Biological Sciences seeking basic knowledge of physics. Two hours of lecture and one two-hour laboratory period weekly. Satisfies the GER in Physical and Biological Sciences. *Either semester*

PH 102 Modern Physics for the Humanist (3 crs.)

The principal theme of this course is 20th century attempts to understand the basic laws of nature and their relationship to us. Among the topics to be considered are classical physics, the theory of relativity, atomic structure and quantum theory along with their implications for philosophy and technology. Satisfies the GER in Physical and Biological Sciences (non-lab course).

PH 104 Physical Science for the Elementary School I - Physical Aspects (3 crs.)

A survey of the physical science concepts included in the elementary school curricula. Content is based upon science materials in several national elementary science curricula. Two hours of lecture and one two-hour laboratory period weekly. *Either semester*

PH 180 Energy and its Social Uses (3 crs.)

The basic physical laws of energy are presented. Environmental consequences of solar, fossil, hydro and nuclear energy generation are analyzed. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Either semester*

PH 181 Elements of Physics I (3 crs.)

The language and methods of physics as illustrated in mechanics, heat and sound are studied. Applications of fundamental principles of physics to all branches of physical science are examined. Two hours of lecture and one two-hour laboratory period weekly. Satisfies the GER in Physical and Biological Sciences. *Fall semester*

PH 182 Elements of Physics II (3 crs.)

Principles of electricity, magnetism, optics and modern physics are studied. Two hours of lecture and one two-hour laboratory period weekly. (*Prerequisite: PH 181*) *Spring semester*

PH 191 Engineering Physics I (4 crs.)

Mechanics, properties of matter, fluid flow, and heat with applications to engineering. Three hours of lecture and one three-hour laboratory period weekly. (*Prerequisite: MA 151 taken concurrently*) *Fall semester*

PH 192 Engineering Physics II (4 crs.)

Electricity, magnetism, sound, and optics with engineering applications. Three hours of lecture and one one-hour laboratory period weekly. (*Prerequisite: PH 191; MA 152 taken concurrently*) *Spring semester*

PH 243 General Physics I (4 crs.)

This is a calculus-based beginning course in physics which emphasizes the study of kinematics, dynamics and heat. Three hours of lecture and one three-hour laboratory weekly. Satisfies the GER in Physical and Biological Sciences. (*Prerequisite: MA 151 or equivalent*) *Fall semester*

PH 244 General Physics II (4 crs.)

This course is a calculus-based study of electricity, magnetism and light. Three hours of lecture and one three-hour laboratory period weekly. (*Prerequisite: PH 243*) *Spring semester*

PH/CH 260 Microprocessors - Microcomputer Technology (4 crs.)

A study of the electrical families, components and processes used to build the components of microprocessors and microcomputers. An examination of timing cycles for microprocessors with limitations on the digital devices used and the various means in which these components can be assembled in the construction of a microcomputer. Comparison of the various microcomputers available. (*Prerequisite: a college-level course in PH or consent of the instructor*) *Fall semester*

PH 372 Biophysics, Microscopic Aspects (3 crs.)

The structure, function and control of the human body on the microscopic or molecular level. May be taken independently of PH 371. (*Prerequisite: consent of the instructor*) *Offered alternate years, spring semester*

PH 376 Electronic Circuits (4 crs.)

Circuit analysis: Matrix methods, transform methods, amplifiers, feedback theory, operational amplifiers, integrated circuits, analog computers. Three hours of lecture and one three-hour laboratory weekly. (*Prerequisite: PH 182 or PH 244 or consent of the department*) *Offered alternate years, fall semester*

PH 381 Thermal Physics (3 crs.)

Thermodynamics; kinetic theory; and statistical mechanics. (*Prerequisite: PH 243, PH 244*) *Offered alternate years, spring semester*

PH 385 Optics (3 crs.)

Study of geometrical and physical optics. (*Prerequisite: PH 244*) *Fall semester*

PH 386 Optical Electronics (3 crs.)

Optical principles throughout the electromagnetic spectrum, sources, displays, light-reactive devices, fiber optics, EPR, NMR. (*Prerequisite: PH 392*) *Spring semester*

PH 387 Modern Physics (3 crs.)

Theory of relativity; atomic structure; quantum theory; nuclear physics and elementary particles. (*Prerequisite: PH 243, PH 244*) *Fall semester*

*See pages 75-76 for general information regarding course offerings.

PH 388 Electricity and Magnetism (4 crs.)

The theory and applications of the fundamental equations of electromagnetism. Three hours of lecture and one three-hour laboratory period weekly. (Prerequisite: PH 244) Fall semester

PH 389 Mechanics (3 crs.)

Vector treatment of forces, torques; dynamics of particles and rigid bodies; work and energy; momentum; small oscillation theory; Lagrangian and Hamiltonian formulation of dynamics. (Prerequisite: PH 243) Spring semester

PH 392 Digital Electronics I (4 crs.)

Elements of digital electronics: Boolean algebra of switching circuits, binary logic circuits, digital computer logic circuits. Three hours of lecture and one three-hour laboratory period weekly. (Prerequisite: college-level course in physics or consent of the instructor) Fall semester

PH 394 Digital Electronics II (4 crs.)

Counter analysis and design, sequential circuits, digital circuit fault analysis, analog-digital conversion, microprocessors. Three hours of lecture and one three-hour laboratory period weekly. (Prerequisite: PH 392) Spring semester

PH 398 Solid State Electronics (3 crs.)

The basic principles of operation of the various types of diodes, transistors, SCRs, solar cells, field effect devices, and integrated circuits. (Prerequisite: PH 192 or PH 244) Spring semester

PH 402 Quantum Mechanics (3 crs.)

Wave nature of matter; the Schrodinger equation; application of the Schrodinger equation to the electron, the hydrogen atom, multi-electron atoms and radiation. (Prerequisite: PH 403) Spring semester

PH 403 Mathematical Physics (3 crs.)

Vector analysis; matrices, linear differential equations; Sturm-Liouville theory; Fourier series; orthogonal functions; Laplace transform. (Prerequisite: PH 243, PH 244, MA 201) Offered alternate years, fall semester

PH 405 Nuclear Physics (3 crs.)

Nuclear forces, nuclear models, nuclear reactions and radioactivity, and elementary particles. (Prerequisite: PH 387) Offered alternate years

PH 408 Astrophysics (3 crs.)

Stellar atmospheres and interiors; generation and transport of energy; stellar evolution, pulsars, blackholes and quasars; galactic structure; cosmology. (Prerequisite: PH 387 or consent of the instructor) Offered alternate years

PH 409 Theory of Relativity (3 crs.)

The Lorentz Transformation and application to mechanics and electrodynamics; the general Theory of Relativity and application to astrophysics. (Prerequisite: PH 387) Offered alternate years

PH 430 Computer Technology (3 crs.)

Discrete parts and gates for computer systems, memories, computer architecture, microprocessors and microprocessor applications, microcomputers. (Prerequisite: PH 394) Fall semester

PH 498 Internship in Physics (3-15 crs.)

Laboratory experience in industrial or government laboratories, or academic laboratories at other institutions. (Prerequisite: Consent of Department; formal application required) Either semester

PH 499 Directed Study in Physics (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: consent of the department, formal application required) Either semester

Other Approved Courses:

PH 110 Physics for Nurses

PH 193 Engineering Physics III

PH 200 Survey of Physics

PH 270 Transportation for the Future--Physical Implications

PH 291 Engineering Mechanics I

PH 292 Engineering Mechanics II

PH 301 Physics of Sports

PH 371 Biophysics, Macroscopic Aspects

PH 375 Wave Theory

PH 390 Research Problems in Physics

PH 391 Solid State Physics

PH 393 Special Topics in Modern Physics

PH 399 Experimental Physics

PH 404 Methods of Mathematical Physics

PH 410 Electrodynamics

PH 411 Procedures in Experimental Physics I

PH 412 Procedures in Experimental Physics II

PH 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalog.

PH 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalog.

PH/CH 525 Problem Solving in Chemistry and Physics (3 crs.)

Skills needed in the solving of problems in chemistry and physics will be developed. Emphasis will be on the application of mathematics to problem solving. Topics will be chosen from the sciences to illustrate the application of algebra, geometry, linear algebra and calculus to physics and chemistry. Methods of treating data obtained in the laboratory will be developed. (Prerequisites: High School/Middle School Teacher of Mathematics or Science)

PH 550 Physics for Teachers--A Modern Review (3 crs.)

A modern review of topics in physics for the junior high teacher. Among the topics to be covered are: Newton's Laws, generation and application of energy, electricity and magnetism, optics, sound, relativity, physics of the electron and nucleus. Emphasis will be placed on recent developments. (Prerequisite: Science teaching experience at the pre-baccalaureate level and consent of Instructor)

School of Arts and Sciences

PH 581 The Physics of the Environment (3 crs.)

The generation and utilization of energy and their environmental impact. Energy sources included are solar, wind, hydroelectric, nuclear, geothermal, fusion. *(Prerequisite: consent of the instructor)*

PH 583 Physics of the Atom (3 crs.)

A study of the atomic view of matter and radiation. Topics included are: the kinetic theory of gases, theory of the electron, Bohr's theory of the atom, many electron atoms, theory of molecules and spectra, and the theory of relativity. *(Prerequisite: consent of the instructor)*

PH 584 Physics of the Nucleus and Elementary Particles (3 crs.)

A study of the nucleus and relationship of elementary particles. The topics included are: nuclear structure, radioactivity, nuclear reactions, nuclear accelerators, conservation laws, symmetry and invariance principles, unified view of the elementary particles, and cosmic rays. *(Prerequisite: consent of the instructor)*

PH 585 Physics of the Solid State (3 crs.)

A unified treatment of the basic models used to describe solid state phenomena. Topics included are: crystal structure, electric, magnetic, and thermal properties of matter, transport properties of metals and semi-conductors; band theory; super conductivity. *(Prerequisite: consent of the instructor)*

PH 587 Radiation Physics I (3 crs.)

Wave propagation and the electromagnetic spectrum, interference, polarization, coherence theory, electromagnetic theory. *(Prerequisite: consent of the instructor)*

PH 588 Radiation Physics II (3 crs.)

Blackbody radiation, photo-electric effect, the Bohr Model of the Atom and Atomic Spectra, the Schrodinger equation and applications to radiation problems. *(Prerequisite: consent of the instructor)*

PH 589 Physics of the Solar System (3 crs.)

Physical properties and motion of the members of the solar system and interplanetary medium. *(Prerequisite: consent of the instructor)*

PH 593 Special Topics in Secondary School Science (3 crs.)

An introduction to the environmental and energy-related physical science topics presented in the Secondary School Science curricula. Special emphasis will be placed upon the science content found in these curricula materials. Lectures, seminars, laboratory work, workshops and model classes will be included in this course. *(Prerequisite: consent of the instructor)*

PH 594 Special Topics in Junior High Science I (6 crs.)

An introduction to junior high science programs. Special emphasis will be placed upon the science content found in these curricula materials. Lectures, seminars, laboratory work and model classes will be included in this course. *(Prerequisite: consent of the instructor)*

PH 595 Special Topics in Junior High Science II (3 crs.)

A continuation of the course PH 594, in which the science content of junior high science programs is studied and evaluated.

PH 597 Special Topics in Elementary Science (3 crs.)

An introduction to elementary school science materials. Special emphasis will be placed upon the study of the science content included in these materials. Lectures, laboratory work, seminars, workshops, and model classes will be included in this course. *(Prerequisite: consent of the instructor)*



Department of Political Science

Faculty

<i>Chairperson:</i>	Associate Professor Pauline Harrington
<i>Professors:</i>	Guy Clifford, Michael Kryzaneck, David Sudhalter
<i>Associate Professor:</i>	Shaheen Mozaffar
<i>Instructors:</i>	Erna Gelles, Christopher Kirkey

Undergraduate Programs

Bachelor of Arts

The Department of Political Science offers the Bachelor of Arts Degree in Political Science.

The Political Science Program

The Department of Political Science offers three programs of study in political science: a political science major (no concentration); a political science major (International Affairs Concentration); and a political science major (Legal Studies Concentration).

The political science major (no concentration) offers students an understanding of governmental structures and political processes in their own country and in other parts of the world. This program provides a foundation

for graduate work in political science, public administration and international affairs, for the study of law, and for professional careers in teaching, and in the public and private sectors.

The political science major (International Affairs Concentration) offers students an understanding of the structures and processes that govern political and economic relations among global actors. This program provides a foundation for graduate work in international politics, international business and economics and international law and organization, and for a professional career in these fields.

The political science major (Legal Studies Concentration) offers students a background for professional careers in the field of law. This program provides a foundation for law school and for paralegal studies.

Double Major with Elementary Education, or Early Childhood Education, or Special Education

Students may choose a double major in Political Science and Elementary Education, or Early Childhood Education, or Special Education for certification purposes. Appropriate advising materials with suggested course sequences are available.

School of Arts and Sciences

Internship Program

An internship program in political science is available to all students, majors and non-majors, who meet the program criteria. A wide range of assignments are available with federal, state and local governments and non-profit organizations. Assignment to the internship program is on the basis of application to and subsequent selection by the internship supervisor. Application procedures follow college policy (see section on "Internships" in this catalog). To be eligible for an internship, a Political Science major or minor must have already completed PO 172 and a 300 level political science course and must receive the consent of the internship supervisor. Non-Political Science majors and minors must have the approval of their major adviser and the political science internship supervisor, and must have taken one political science course. Interns must have achieved at least a junior standing. Credits shall be limited to three unless more are approved by the Department of Political Science. It is recommended that those students with an interest in the program confer with the Internship Supervisor as soon as possible in the semester before their proposed internship.

Pi Sigma Alpha

The Political Science Department has a chapter (the Pi Upsilon Chapter) of Pi Sigma Alpha, the national political science honor society. Each year, the political science faculty selects and invites political science majors who are juniors and seniors and who have demonstrated outstanding academic accomplishments to join. Each initiate receives an inscribed certificate of membership.

Political Science Core Courses

All political science majors, regardless of their concentration, must complete 21 credits by taking the following **CORE COURSES**:

PO 172 American Government: The Federal System
PO 260 International Relations
PO 274 Western Political Thought--Plato to the Present
PO 275 Comparative Government
PO 277 American Government: State and Local
PO 475 Senior Seminar in Political Science
PY 201 Quantitative Methods in Behavioral Science

Political Science Major (No Concentration)

A student choosing the political science major (no concentration) must complete the above CORE courses and 15 credits (five courses) at the PO 300 or 400 level.

Political Science Major (International Affairs Concentration)

A student choosing the political science major (International Affairs Concentration) must complete the above CORE courses and the following concentration requirements:

PO 384 United States Foreign Policy Since World War II
PO 473 International Law and Organization

In addition, three courses selected from the following:

PO 381 United States-Latin American Relations
PO 382 Latin American Government and Politics
PO 383 Comparative Political Systems
PO 385 Government and Politics in the Middle East
PO 386 Canadian Government
PO 387 Government and Politics of Africa
PO 388 The Politics of the Communist World
PO 461 Contemporary International Relations
PO 488 Politics and Development in the Third World

Political Science Major (Legal Studies Concentration)

A student choosing the political science major (Legal Studies Concentration) must complete the above CORE courses and the following concentration requirements:

PO 285 Introduction to Law
PO 472 American Constitutional Development

In addition, two courses selected from the following:

PO 372 Legislative Process and Procedure
PO 395 Administrative Law and Regulation
PO 473 International Law and Organization

One additional elective at the PO 300 - 400 level.

Political Science Minor

A student may qualify as a Political Science minor by completing the following requirements:

PO 172 American Government: The Federal System
PO 260 International Relations
PO 274 Western Political Thought—Plato to the Present
PO 275 Comparative Government

Three electives, at least one of which must be at the PO 300 - 400 level.



School of Arts and Sciences

Course Offerings*

PO 100 Introduction to Politics (3 crs.)

This course introduces the world of politics with emphasis on basic concepts of political organizations, structures and theory balanced with current political affairs. Satisfies the GER in Social Sciences. *Either semester*

PO 172 American Government: The Federal System (3 crs.)

This general introduction to the American governing system includes an examination of constitutional principles and structures, decision-making institutions, parties interest groups and electoral politics and the process of public policy formulation and implementation. Satisfies the GER in Social Sciences. *Either semester*

PO 260 International Relations (3 crs.)

This course introduces modern world politics, with emphasis on change and continuity in the structure and processes governing relations within the international community. Emphasis will be placed on the nation-state, dilemmas facing the global community. Satisfies the GER in Social Sciences. *Either semester*

PO 273 United States and Massachusetts Constitutions (1 cr.)

Structure of government and rights and responsibilities according to Federal and Commonwealth constitutions. *Either semester*

PO 274 Western Political Thought - Plato to the Present (3 crs.)

This course covers the principal ideas and philosophies of politics articulated by philosophers and political thinkers since ancient times. The student will be introduced to many of the age-old and puzzling questions of how people can best govern themselves using legal, institutional and behavioral approaches. Satisfies the GER in Social Sciences. *Fall semester*

PO 275 Comparative Government (3 crs.)

Political behavior and government systems in Great Britain, France, the Soviet Union, etc. (*Prerequisite: PO 172*) *Fall semester*

PO 277 American Government: State and Local (3 crs.)

State government and politics with emphasis on Massachusetts affairs. (*Prerequisite: PO 172 or consent of the instructor*) *Either semester*

PO 279 Introduction to Public Administration (3 crs.)

The relationship of the administrative branch of government to other branches in the making and implementation of public policy; theories of government organization for efficient administration; problems of budgeting, personnel, merit systems, type of agency organization, popular control over the bureaucracy. (*Prerequisite: PO 172*) *Either semester*

PO 285 Introduction to Law (3 crs.)

A non-technical discussion of legal topics, including the relationship of law to social and humanitarian problems; open to majors and non-majors.

PO 338/339 Honors Tutorial in Political Science (3 crs.)

Special topics in Political Science. Open to All-College and Departmental Honors students. (*Prerequisite: consent of the political science department*)

PO/EC 340 Law and Economics (3 crs.)

This course examines the economic basis for legal decisions. Microeconomic theory is combined with an analysis of the law, with particular emphasis on case studies. Topics covered include the problems of defining property rights and the economics of tort, contract and criminal law. (*Prerequisites: PO 172 or PO 285 and EC 101*)

PO 372 Legislative Process and Procedure (3 crs.)

The role of legislatures in modern American government, federal and state; the relationships of the voter and of apportionment to law making; the two-party system and its impact on the law-making process; the committee system and seniority, and constitutional limitations on legislatures. (*Prerequisite: PO 172, PO 277*) *Spring semester*

PO 374 Modern Political Theory (3 crs.)

The ideas of major political thinkers in the era of the modern nation-state. (*Prerequisite: PO 172*) *Spring semester*

PO 375 Political Parties (3 crs.)

The historical development of the American party system, and contemporary aspects of its functioning, at the national, state, and local level. (*Prerequisite: PO 172, PO 277*) *Offered once in three years, fall semester*

PO 376 Municipal Government (3 crs.)

Study of selected problems of structure, organization, and powers of local government; intergovernmental relationships; administrative and personnel management; special emphasis on local government in Massachusetts. (*Prerequisite: PO 172, PO 277*) *Offered alternate years, fall semester*

PO 381 United States--Latin American Relations (3 crs.)

The evolution and current status of the political, economic and strategic relationship between the United States and the Latin American nations. (*Prerequisite: PO 172, PO 260*) *Offered alternate years*

PO 382 Latin American Government and Politics (3 crs.)

A survey of the current governing structures and the general political conditions in the major Latin American nations. (*Prerequisite: PO 172, PO 275*) *Offered alternate years*

PO 383 Comparative Political Systems (3 crs.)

An advanced investigation and comparison of the primary political institutions and processes found in a number of contemporary national systems. Special emphasis to be placed on the role and status of constitutions, interest groups, political parties, policy-making bodies and other areas. (*Prerequisite: PO 172, PO 275*) *Offered alternate years*

*See pages 75-76 for general information regarding course offerings.

PO 384 United States Foreign Policy Since World War II (3 crs.)

The study of the goals, policies, structures and procedures that have formed and guided the relations of the United States with other world powers since the conclusion of World War II. (Prerequisite: junior status and consent of the instructor) Offered alternate years, Spring semester

PO 385 Government and Politics in the Middle East (3 crs.)

An introduction to the structures and processes of Middle Eastern Government and Politics, focusing on the evolution of contemporary Middle East since the end of World War I and on economic growth, social change, and political development in the region and in specific countries. (Prerequisites: PO 172 and PO 275 or consent of the instructor) Offered alternate years, spring semester

PO 386 Canadian Government (3 crs.)

The origins and development of the government of Canada from Confederation; the transition from colonial to dominion status; the Statute of Westminster, and independence. Federal government organization, relations with the British Commonwealth. (Prerequisite: PO 172, and PO 275 or consent of the instructor) Offered alternate years

PO 387 Government and Politics of Africa (3 crs.)

An introduction to the organization and processes of African politics centering on the political evolution of contemporary Africa in general but with specific attention to selected nations as appropriate. (Prerequisite: PO 172 and PO 275, or consent of the instructor) Offered alternate years, spring semester

PO 388 The Politics of the Communist World (3 crs.)

This course will introduce the student to the political development of a number of communist societies such as those of the Soviet Union, countries of Eastern Europe, the People's Republic of China and the relationships between these states. Also included will be analysis of political and social differences as well as similarities. (Prerequisite: PO 275)

PO 390 Public Finance (3 crs.)

The role of government in a market economy; the role of taxation in a market economy; principles of taxation; problems of budgeting, government expenditure and debt, and economic growth. (Prerequisite: PO 279 or consent of the instructor) Spring semester

PO 395 Administrative Law and Regulation (3 crs.)

The legal and regulatory systems of federal, state and local governments will be analyzed as to their relationship to policy implementation and administration. Emphasis will be placed on charters, ordinances, legislative power and administrative control in areas such as finance, personnel, labor, land use, licensing and education. (Prerequisite: PO 279 or consent of the instructor) Offered alternate years

PO 461 Contemporary International Relations (2 or 3 crs.)

Application of the techniques of analysis, simulation and forecasting to international relations situations, problems and current issues. (Prerequisite: PO 260 or consent of the instructor) Offered once in three years

PO 472 American Constitutional Development (3 crs.)

Principles and concepts of the U.S. Constitution, as revealed in leading court decisions. Judicial review, federalism, separation of powers, implied powers, due process of law, equal protection, the contract clause, etc. (Prerequisite: PO 172, PO 277)

PO 473 International Law and Organization (3 crs.)

The evolution of international law and organization, their integration, and the effect of international politics thereon; the theoretical and practical aspects of the international legal process; the structure, functions and procedures of the United Nations, etc. (Prerequisite: consent of the instructor) Fall semester

PO 475 Senior Seminar in Political Science (3 crs.)

The undertaking of independent study and a research project presented in oral and written form. (Prerequisite: admission is subject to the consent of the department chairperson and the instructor) Either semester

PO 479 Public Policy (3 crs.)

A systematic study of theory and practice in the making and the execution of public policy including the factors of public demand on the political system; decision making in the public sector; tools and techniques for implementation and evaluation; and the import for future planning. (Prerequisite: PO 279) Offered alternate years

PO 485 Honors Thesis in Political Science (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the Departmental Honors Committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with Honors will be determined by the Departmental Honors Committee. (Prerequisite: consent of the department) Either semester

PO 488 Politics and Development in the Third World (3 crs.)

A survey of the political dynamics of development in the Third World with special emphasis on the dominant theories of development, current critical issues in the Third World, internal and external forces affecting Third World countries and the policy directions taken by developing nations. (Prerequisite: PO 260 and PO 275 or consent of the instructor) Offered alternate years

PO 498 Internship in Political Science (3-15 crs.)

A non-classroom experience intended to complement the academic preparation of a limited number of juniors and seniors majoring in political science. Placements are in areas such as federal, state, city, and town governments and private interest groups. (Prerequisite: consent of the department chairperson; formal application required) Either semester

PO 499 Directed Study in Political Science (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: consent of the department chairperson; formal application required) Either semester

Department of Psychology

Faculty

<i>Chairperson:</i>	Professor Kenneth Wolkon
<i>Professors:</i>	Drake Chisholm, Richard Colgan, Herbert Greenwald, Ruth Hannon, David Richards, Louis Schippers, James Scroggs, Susan Todd
<i>Associate Professor:</i>	Margaret Johnsoni
<i>Assistant Professor:</i>	Donald Brown, Elizabeth Kandel Englander

Undergraduate Program

Bachelor of Arts/Bachelor of Science

The objectives of the Department of Psychology are to 1) provide all students with an understanding of psychology and what psychologists do; 2) give students (where applicable) a background in psychology that will help them do their job better; 3) give our terminal majors sufficient training to enhance their opportunities for vocational placement in psychology-related occupations; 4) give our majors who intend to become professional psychologists sufficient preparation to permit them to be competitive in achieving admission to and success in graduate schools.

Psychology Major

PY 100 Introductory Psychology
PY 224 Child Psychology
or
PY 227 Development Through the Life Cycle
PY 252 Psychology of Learning
PY 310 Social Psychology
PY 360 Psychology of Personality
One course from the following:
PY 318 Experimental Social Psychology
PY 324 Experimental Child Psychology
PY 340 Experimental Psychology: Sensation and Perception
PY 353 Experimental Psychology: Learning and Motivation

In addition, psychology majors must select five elective courses as follows:

Advanced psychological studies (select one of the following courses):

PY 303 Survey of Psychological Testing
PY 319 History of Psychology
PY 321 Psychology of Human Differences
PY 350 Special Topics in Psychology
PY 404 Attitude and Personality Measurement
PY 415 Psychological Theory
PY 490 Senior Seminar

Biobehavioral, cognitive, and social psychological studies (select one of the following courses):

PY 210 Applied Social Psychology
PY 240 Sensation and Perception
PY 280 Consumer Psychology
PY 305 Psychology of Personnel Selection
PY 313 Psychology of Organizations
PY 337 Cognitive Psychology
PY 342 Physiological Psychology

PY 344 Drugs and Human Behavior
 PY 355 Behavioral Modification
 PY 385 Environmental Psychology
 PY 474 Forensic Psychology

Clinical Studies and Practicum and Research (select one of the following courses):

PY 365 Medical Psychology
 PY 369 Psychology of Criminal Behavior
 PY 370 Abnormal Psychology
 PY 470 Clinical Psychology
 PY 475 Psychology of Group Behavior
 PY 492 Seminar: Clinical Methods in Medical Psychology
 PY 495 Practicum: Medical Psychology
 PY 496 Personnel Practicum
 PY 497 Research
 PY 498 Clinical Practicum
 PY 499 Directed Study in Psychology

Plus two additional electives: any psychology course.

Also required:

MA 110 Elementary Statistics I
 or
 PY 201 Quantitative Methods in the Behavioral Sciences

BI 100 General Principles of Biology
 or
 BI 102 Introduction to Zoology

and

One of the following:

BI 110 Biology: A Human Approach
 BI 111 Human Heredity
 BI 112 Biology and Human Thought
 BI 113 Fundamentals of Biology
 BI 117 The Biological Environment
 BI 118 Evolution
 BI 171 Human Anatomy and Physiology I
 BI 172 Human Anatomy and Physiology II
 BI 272 Animal Behavior
 BI 273 Vertebrate Zoology
 BI 280 Human Physiology
 BI 390 Introduction to Pharmacology

Students enrolled prior to Fall 1987 and transfer students enrolled prior to September 1989 are required to complete a foreign language through the intermediate level or its equivalent.

Psychology Minor

PY 100 Introductory Psychology
 Five other psychology courses to fit the needs of the individual students.

Industrial-Personnel Psychology Concentration

This concentration will provide students with an understanding of the psychological principles related to personnel work and the application of these principles to business and industry.

PY 100 Introductory Psychology
 PY 227 Development Through the Life Cycle
 PY 252 Psychology of Learning
 PY 310 Social Psychology
 PY 360 Psychology of Personality

One course from the following:

PY 318 Experimental Social Psychology
 PY 324 Experimental Child Psychology
 PY 340 Experimental Psychology: Sensation and Perception
 PY 353 Experimental Psychology: Learning and Motivation

Additional requirements for Industrial-Personnel Psychology students include:

PY 210 Applied Social Psychology
 PY 303 Survey of Psychological Testing
 or
 PY 404 Attitude and Personality Measurement
 PY 305 Psychology of Personnel Selection
 PY 313 Psychology of Organizations
 PY 321 Psychology of Human Differences
 PY 496 Personnel Practicum
 MA 110 Elementary Statistics

or
 PY 201 Quantitative Methods in the Behavioral Sciences

BI 100 General Principles of Biology

or

BI 102 Introduction to Zoology

and

One course from the following:

BI 110 Biology: A Human Approach
 BI 111 Human Heredity
 BI 112 Biology and Human Thought
 BI 113 Fundamentals of Biology
 BI 117 The Biological Environment
 BI 118 Evolution
 BI 171 Human Anatomy and Physiology I
 BI 172 Human Anatomy and Physiology II
 BI 272 Animal Behavior
 BI 273 Vertebrate Zoology
 BI 280 Human Physiology
 BI 390 Introduction to Pharmacology

School of Arts and Sciences

EN 201 Technical Writing I
 AC 240 Accounting I
 or
 CS 100 Introduction to Computer Science
 SO 350 Sociology of Work
 or
 SO 332 Sociology of Organizations
 HI 346 American Labor History
 One course from the following:
 CC 452 Organizational Communication
 EC 101 Principles of Microeconomics
 EC 102 Principles of Macroeconomics

Medical Psychology Concentration

PY 100 Introductory Psychology
 PY 227 Development Through the Life Cycle
 PY 252 Psychology of Learning
 PY 310 Social Psychology
 PY 360 Psychology of Personality
 One course from the following:
 PY 318 Experimental Social Psychology
 PY 324 Experimental Child Psychology
 PY 340 Experimental Psychology:
 Sensation and Perception
 or
 PY 353 Experimental Psychology: Learning
 and Motivation

Additional requirements for Medical Psychology students include:

PY 365 Medical Psychology
 PY 342 Physiological Psychology
 PY 344 Drugs and Human Behavior
 or
 PY 355 Behavior Modification
 PY 303 Survey of Psychological Testing
 PY 492 Seminar: Clinical Methods in Medical Psychology
 PY 495 Practicum: Medical Psychology
 MA 110 Elementary Statistics
 or
 PY 201 Quantitative Methods in the Behavioral Sciences
 BI 100 General Principles of Biology
 or
 BI 102 Introduction to Zoology

One course from the following:
 BI 110 Biology: A Human Approach
 BI 111 Human Heredity
 BI 112 Biology and Human Thought
 BI 113 Fundamentals of Biology
 BI 117 The Biological Environment
 BI 118 Evolution
 BI 171 Human Anatomy and Physiology I
 BI 172 Human Anatomy and Physiology II
 BI 272 Animal Behavior
 BI 273 Vertebrate Zoology
 BI 280 Human Physiology
 BI 390 Introduction to Pharmacology
 EN 201 Technical Writing
 AN 330 Medical Anthropology
 or
 SO 307 Medical Sociology
 PL 205 Medical Ethics: Issues of Life and Death
 CH 102 Chemistry in Everyday Life
 or
 PH 102 Modern Physics for the Humanist
 SW 403 Social Services in the Health Care Field

It is strongly recommended that all psychology majors planning further work in psychology at the graduate level take PY 319 History of Psychology and/or PY 415 Psychological Theory. Such students should also elect courses which will develop their computational and writing skills. In addition, some computer literacy is advantageous.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific teacher certification and program requirements.

Double Major with Elementary Education, Early Childhood Education and Special Education

Students may choose a double major in Psychology and Elementary Education, Early Childhood Education or Special Education for certification purposes. Appropriate advising materials with suggested course sequences are available.

Honors Program

The Honors Program in Psychology provides highly motivated Psychology Majors with opportunities to enhance their academic program through intensive scholarly study and research designed to be of assistance in post-graduate employment or in the pursuit of an advanced degree in Psychology. Contact the Department of Psychology for further information concerning eligibility and application.

Graduate Programs

Master of Arts

The Department of Psychology at Bridgewater State College in conjunction with the University of Massachusetts at Dartmouth offers a graduate program leading to the degree of Master of Arts with specializations in: Clinical-Behavioral Analysis (University of Massachusetts at Dartmouth only), Clinical-Psychodynamic Therapy (BSC only), Human Service Administration (University of Massachusetts at Dartmouth only), and Industrial-Personnel (BSC only).

The objectives of the program are threefold: 1) provide students with specific and applied research and problem-solving skills; 2) provide all clinical students with a broad exposure to a variety of modes of therapy; 3) provide students with extensive experiential learning opportunities including practica, placements and intensive supervision.

Each applicant will be examined in light of his or her own academic record as well as work related experience. All applicants must submit GRE scores including both General and Advanced tests; three letters of recommendation; undergraduate transcript and work related history. One must possess an undergraduate degree in either psychology or a closely related field. Since enrollment is limited, successful candidates should have a minimum of 3.0 GPA as an undergraduate, above average GRE scores and some experience in the field. Final candidates will also receive a personal interview from the Admissions Committee.

Requirements for the Degree

Students must complete a minimum of 49 approved graduate credits for Psychodynamic Therapy/Clinical Psychology and 43 approved graduate credits for Industrial Personnel/Organizational Psychology. Of these, four (4) credits will include a thesis research project. Students must provide an oral defense of their thesis before graduation. All students will complete a 15-credit academic core, a 12-credit clinical core, 12-18 credits depending on the applied specialty and a 4-credit thesis project.

Program Design

The academic core will be identical at both campuses and students will be allowed to begin their studies at either institution. Matriculated students will be expected to take two to three courses per semester to complete the first year academic core at the same campus before concentrating on their specialty areas. To accommodate students who are currently working, courses will be offered after 4 p.m.

Presently, the program is presented as a three-year program. In the second and third year of the program, students will attend the campus offering their selected area of specialization.

School of Arts and Sciences

Part I Academic Core

PY 501 Proseminar in Psychology I	3 crs.
PY 502 Proseminar in Psychology II	3 crs.
PY 505 Research Methods and Design I	3 crs.
PY 506 Research Methods and Design II	3 crs.
PY 507 Research Methods and Design III	3 crs.

Part II Clinical Core

PY 504 Research	4 crs.
PY 511 Theories of Psychotherapy	3 crs.
PY 512 Evaluation Techniques	3 crs.
PY 591 Internship I	3 crs.
PY 592 Internship II	3 crs.

Part III Applied Specialty (Two Bridgewater State College Options)

A. Psychodynamic Therapy/Clinical

PY 509 Clinical Pre-Practicum	3 crs.
PY 541 Contemporary Psychoanalytic Theory	3 crs.
PY 542 Psychodynamic Psychotherapy	3 crs.
PY 543 Psychodynamic Marital and Family Therapy	3 crs.
PY 575 Psychopathology	3 crs.
PY Elective	3 crs.

B. Industrial-Personnel/Organizational

PY 551 Advanced Seminar in Personnel	3 crs.
PY 552 Employee Evaluation Techniques	3 crs.
PY 553 Theories and Research in the Psychology of Motivation	3 crs.
PY Elective	3 crs.

The departmental offerings listed below include the following courses which may not be taken for graduate credit:

All courses below the 300 level

PY 497 Research

PY 498 Clinical Practicum

PY 499 Directed Study in Psychology

Important: In general, other 300 and 400 level courses may be taken for graduate credit. Only 500 level courses will be accepted for credit in the M.A. Program in Psychology. Under current guidelines established by the Commonwealth, students completing the program of study in Psychodynamic Psychotherapy will be eligible (after completing the required number of post-graduate supervised clinical hours) for licensure as a Mental Health Counselor in Massachusetts.

Course Offerings*

PY 100 Introductory Psychology (3 crs.)

This is a survey of the different processes such as perception, sensation, learning, emotion, with a discussion of the underlying physiological processes as well as an introduction to the more complex areas such as personality development, psychopathology, social influences, and testing. Methods of investigation and research will be integrated with the above topics. Satisfies the GER in Behavioral Sciences Sciences. *Either semester*

PY 200 Non-Western Theories of Personality (3 crs.)

This course examines conceptions of personality as they have appeared in non-Western traditions. Differences in focus, methodology and views of the nature of the self are investigated as they relate to cultural world-views such as Yoga, Zen Buddhism and Sufism. *(Prerequisite: PY 100)* Satisfies the GER in Non-Western Civilization. *Spring semester*

PY 201 Quantitative Methods in the Behavioral Sciences (3 crs.)

The fundamentals of behavioral science research, with application of the scientific method to the particular problems and issues faced by psychologists, anthropologists, and sociologists. Includes hypothesis formulation, research design, data collection analysis and interpretation, and research report. *(Prerequisite: 3 credits required - MA 105 or above—acceptable by the Psychology and Social Work Departments in lieu of MA 110)*

PY 210 Applied Social Psychology (3 crs.)

Effective communication and better understanding of oneself; listening, persuasion, conflict resolution, goals, expectations, and self-confidence. Contemporary problems such as dissent and minority problems. Guest speakers when possible. *(Prerequisite: PY 100)* *Offered alternate years*

PY 224 Child Psychology (3 crs.)

An investigation of the growth and development of the child from conception to pre-adolescence will include both the influence of heredity and other biological factors as well as the social influences of child rearing practices, family value systems, and peer culture effects. Topics will include the development of verbal ability, conscience and moral judgment, personality and self concept. Current theories and research findings will be discussed in relation to the above topics. *(Prerequisite: PY 100)* *Either semester*

PY 226 Adolescent Psychology (3 crs.)

An investigation of the growth and development of the pre-adolescent and adolescent including both physical as well as psychological changes relating to intellectual, moral, emotional, personality, and social aspects. Current theories and research findings will be discussed in relation to the above topics. *(Prerequisite: PY 100)* *Either semester*

PY 227 Development Through the Life Cycle (3 crs.)

This course offers a survey of the life cycle and an integrated approach to understanding the individual and developmental processes. The developmental tasks of infancy, childhood, adolescence, adulthood are viewed from a life span perspective, with emphasis on continuity and change. *(Prerequisite: PY 100)* *Offered alternate years, spring semester*

PY 240 Sensation and Perception (3 crs.)

The auditory, visual, gustatory, olfactory, and cutaneous senses will be studied by presenting the basic data with their implications concerning functioning of these systems. The methods for collecting data and the theory concerning such phenomena as perception of movement, time, space, form, pattern, and attention will be presented. *(Prerequisite: PY 100)* *Offered alternate years, spring semester*

PY 252 Psychology of Learning (3 crs.)

The shaping of behavior, laboratory conditioning, reinforcement, approach and avoidance of a goal, discrimination and generalization of physical cues, animal learning experiments. Experimental approaches to the study of human behavior. *(Prerequisite: PY 100)* *Either semester*

PY 280 Consumer Psychology (3 crs.)

An investigation of the psychological techniques being used in advertising and merchandising. Emphasis will be on the psychological aspects of consumer purchasing practice with respect to motivation, attitudes, learning, and perception. *(Prerequisite: PY 100)* *Either semester*

PY 303 Survey of Psychological Testing (3 crs.)

An introduction to the theory of psychological measurement and test development including item indices, speededness, reliability, and validity with a survey of various psychological instruments used in assessment, personnel selection, and psychological research. *(Prerequisite: PY 100 and MA 110 or PY 201)* *Fall semester*

PY 305 Psychology of Personnel Selection (3 crs.)

The psychology of interviewing, testing and data analysis as it is employed for the effective placement of personnel in business, industry, and other organizations. Includes: criterion selection, job analysis, outcome prediction and validation, and a psychological perspective of jobs and job function. *(Prerequisite: PY 100)* *Fall semester*

PY 310 Social Psychology (3 crs.)

The individual in social situations: attitude formation and change, culture and society, language and communication, leadership and group dynamics, personality characteristics and interpersonal relationships, small group behavior. *(Prerequisite: PY 100)* *Either semester*

*See pages 75-76 for general information regarding course offerings.

School of Arts and Sciences

PY 313 Psychology of Organizations (3 crs.)

Theories and research, organizational objectives, systems analyses and efficiency planning, quantity and quality of productivity, morale, leadership, personnel selection, career development, committee effectiveness, evaluation research and use of other feedback techniques to improve functioning. Term project: analysis of an existing organization, with recommendations. *(Prerequisite: PY 100) Spring semester*

PY 318 Experimental Social Psychology (3 crs.)

Recent research including developments in methodology, theory, and research findings. Situational approaches and individual differences useful in testing theories and hypotheses in resolving conflicting findings of previous research. Research project required of the student. *(Prerequisite: PY 310 and MA 110 or PY 201) Offered alternate years*

PY 319 History of Psychology (3 crs.)

A study of the early recognition and historical trends in the study of psychology from the early Greeks through the Renaissance to the 19th and early 20th century schools of thought. Eminent psychologists and their contributions will be integrated with the historical perspective. *(Prerequisite: At least 12 hours of psychology or consent of the instructor) Fall semester*

PY 321 Psychology of Human Differences (3 crs.)

An introduction to the ex post facto method of research and its applications to the investigation of individual and group differences in normal behavior. The relationship of aptitudes, personality, perception, values, etc., to age, birth order, gender, socio-economic class and race will be studied. Topics range from the origin, development and measurement of individual differences, to their applications in counseling, education, industry, and social work. Opportunity will be given for the student to learn about his or her individual differences. *(Prerequisite: PY 100, BI 102 or equivalent) Offered alternate years, spring semester*

PY 324 Experimental Child Psychology (3 crs.)

Students will plan and conduct experiments related to childhood in some of the following areas: motor learning, perception, language acquisition, cognition, and personality development. Proper psychological experimental design will be emphasized. *(Prerequisite: PY 224 and MA 110 or PY 201) Offered alternate years*

PY 327 Psychology of Exceptional Children (3 crs.)

This course will deal with the identification and understanding of children with special needs. Special techniques appropriate to helping these children will be treated. Emphasis will be placed on the psychological problems of the learning disabled, mentally, emotionally, and physically handicapped children as well as those of the academically gifted or creative child. *(Prerequisite: PY 224 or PY 226 or consent of the instructor) Spring semester*

PY 328 Psychology of Mental Retardation (3 crs.)

Origins (genetic, organic, sensory, maternal, and cultural deprivation), manifestations, diagnostic aids, therapeutic and remedial techniques. *(Prerequisite: PY 224 or consent of the instructor) Offered alternate years, fall semester*

PY 329 Psychology of Aging (3 crs.)

A study of the sensory, cognitive and social changes resulting from old age, including changes in learning, personality, and pathology. Problems of adjustment will be discussed and integrated with research findings in gerontology. *(Prerequisite: PY 100) Offered alternate years, spring semester*

PY 337 Cognitive Psychology (3 crs.)

The psychology of thinking, including historical and philosophical issues; process models, information theory, cybernetic, general systems and field theory approaches, visual and auditory cognition, psycholinguistics, memory and attention, problem solving and concept formation, with implications for mental retardation and learning disabilities. Formerly PY 339. *(Prerequisite: At least 12 hours in psychology or consent of the instructor) Offered alternate years, Spring semester*

PY 338-339 Honors Tutorial (3 crs. each semester)

Special topics in Psychology. Open to All-College and Departmental Honors students. Three hourly meetings weekly. *(Prerequisite: consent of the department) PY 338 fall semester, PY 339 spring semester*

PY 340 Experimental Psychology: Sensation and Perception (3 crs.)

Practical experience in laboratory approach to sensation and perception, including design, methodology, and technology. Emphasis is on evaluating and interpreting the practical and theoretical implications of experimental findings for our understanding of human perceptual and thought processes. *(Prerequisite: PY 100, PY 240, MA 110 or PY 201) Offered alternate years*

PY 342 Physiological Psychology (3 crs.)

A general survey of the neural bases of behavior and current issues of physiological psychology. Topics include: instinctive behavior, biopsychological investigation of learning and motivation. *(Prerequisite: BI 102 or equivalent and PY 100) Offered alternate years, fall semester*

PY 344 Drugs and Human Behavior (3 crs.)

An exploration of psychoactive drugs and the way in which they are used in psychology today. Each drug will be studied in terms of the psychological, psychophysiological and behavioral theories of drug effects. *(Prerequisite: PY 100) Offered alternate years, fall semester*

PY 350 Special Topics in Psychology (3 crs.)

Various and special topics of current interest in psychology will be offered from time to time. Topics will be announced before pre-registration. May be taken more than once but only three credits will be counted towards the first 33 hours in the Psychology major. *(Prerequisite: At least nine hours in psychology or permission of the Instructor) Either semester*

PY 353 Experimental Psychology: Learning and Motivation (3 crs.)

Practical experience in laboratory approach to the study of behavior with considerable freedom for the student to design his own experiments. Mainly oriented toward issues in learning and motivation: classical and operant conditioning, generalization and discrimination, extinction and transfer, goal-approach and avoidance, effect of drive on performance. (Prerequisite: PY 100, PY 252, MA 110 or PY 201) *Offered alternate years*

PY 355 Behavior Modification (3 crs.)

Survey of theoretical positions with research, education, clinical and correctional application of a broad spectrum of behavioral principles to the treatment, modification, amelioration, and prevention of behavior and/or learning problems. Although the primary emphasis will be on tactical considerations, the ethical aspects of such techniques will be discussed. (Prerequisite: PY 100) *Either semester*

PY 360 Psychology of Personality (3 crs.)

Basic concepts in the field of personality, organized around such topics as motivation, personality structure and dynamics, personality development, assessment, and therapy. Problems and styles of adjustments will be considered. (Prerequisite: PY 100) *Either semester*

PY 365 Medical Psychology (3 crs.)

An examination of the psychological and behavioral dimensions of physical illness and health care. Based on contemporary research including psychoneuroimmunology, imagery, and biofeedback, a holistic perspective for working with mind-body interactions is developed. Applications of these issues and methods as they relate to our understanding and experience of health and illness are addressed. (Prerequisite: Minimum of nine hours in psychology or consent of the instructor) *Fall semester*

PY 369 Psychology of Criminal Behavior (3 crs.)

Definition of criminal behavior and the psychodynamics involved in its causality such as: child rearing practices, personality development, attitude formation, etc. The psychological aspects of punitive vs. rehabilitative incarceration, psychological intervention techniques including behavior modification, psychotherapy and psychodrama, will also be covered. An integration of theory with research findings will be maintained. (Prerequisite: PY 100) *Fall semester*

PY 370 Abnormal Psychology (3 crs.)

A systematic study of behavior pathology. Symptom patterns, etiology, prognosis, and prevention. Understanding and care of mental illness. (Prerequisite: PY 100) *Either semester*

PY 385 Environmental Psychology (3 crs.)

Examines the interplay between the psychological aspects of man and his physical environment. Topics will include privacy, personal space, territorial behavior, crowding, urban living, as well as the interactions between the physical environment and a variety of social, cognitive, and perceptual behaviors. (Prerequisite: PY 100) *Offered alternate years*

PY 404 Attitude and Personality Measurement (3 crs.)

Principles of construction of attitude scales and personality assessment techniques, including both projective and inventory-type techniques. Issues and controversies in psychological measurement. (Prerequisite: PY 360, PY 310, and MA 110 or PY 201) *Offered alternate years, spring semester*

PY 415 Psychological Theory (3 crs.)

Fundamental assumptions underlying the psychological enterprise, and issues which are the subjects of continuing debate in the field - e.g. causality, determinism, methodological approaches, the control of behavior, conceptions of the nature of man. (Prerequisite: At least 12 hours in psychology) *Offered once in three years*

PY 470 Clinical Psychology (3 crs.)

Survey of diagnostic and treatment procedures and resources in clinical work with children and adults; professional skills and responsibilities of the clinical psychologist. (Prerequisite: PY 360 and PY 370) *Fall semester*

PY 474 Forensic Psychology (3 crs.)

A study of basic underlying assumptions of personality theory such as intentionality, nature/nurture and the knowability of man as these issues pertain to motive and bias as they manifest themselves in a judicial system. (Prerequisites: PY 360, PY 370) *Offered once in three years*

PY 475 Psychology of Group Behavior (3 crs.)

Group theory, theories of group psychotherapy, leadership and facilitation, group process; plus laboratory experience in interpersonal relations designed to develop skills useful in human services applications. Open only to senior psychology majors with consent of the department. *Offered alternate years, spring semester*

PY 485 Honors Thesis (6 crs.)

This course is open to All-College and Departmental Honors students. Two two-hour weekly meetings with the thesis director will culminate in an honors thesis. The honors student will normally enroll in this course during the fall semester of the senior year and complete the course during the spring semester of the senior year, earning a total of six credits. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Department Honors Committee. (Prerequisite: consent of the department)

PY 486 Honors Thesis II (3 crs.)

This course is open to All-College and Departmental Honors students who have completed PY 485. Two two-hour weekly meetings with the thesis director will culminate in an honors thesis. The honor student will normally enroll in this course during the spring semester of the senior year. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Department Honors Committee. (Prerequisite: PY 485)

School of Arts and Sciences

PY 490 Senior Seminar (3 crs.)

Topical areas of psychology will be offered to allow seniors an opportunity to make individual presentations and critique each other through discussion. Topics will be announced in advance. May be taken twice, but only three credits will be credited toward the first 33 hours for psychology majors. (*Prerequisite: 18 hours in psychology or consent of the instructor*) Either semester

PY 492 Seminar: Clinical Methods in Medical Psychology (3 crs.)

A critical examination of practical issues and problems in psychological, behavioral, and holistic approaches to health and illness. A variety of methods for working with mind-body interventions will be demonstrated and discussed. (*Prerequisite: PY 365 or consent of the instructor*) Spring semester

PY 495 Practicum: Medical Psychology (3-15 crs.)

Provides first-hand experience in the application of psychological, behavioral, and holistic principles to health and illness related issues and problems. (*Prerequisite: consent of the instructor*) Spring semester

PY 496 Personnel Practicum* (3-15 crs.)

Direct application of psychological principles to actual personnel issues and problems in an organization such as business, industry, government, etc. Open only to seniors who wish to gain first-hand experience. (*Prerequisite: consent of the department*) Either semester

PY 497 Research* (1-3 crs.)

Individual or group research project. Primarily for senior majors in psychology; others by special arrangement. May be taken twice for maximum of six credits. (*Prerequisite: consent of the department*) Either semester

PY 498 Clinical Practicum* (3-15 crs.)

Open to seniors who wish to have the opportunity to gain first-hand experience in applying psychology in a clinical setting. (*Prerequisite: consent of the department*) Either semester

PY 499 Directed Study in Psychology* (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department*) Either semester

PY 501-502 Pro-Seminar in Psychology I-II (3 crs. for each semester)

Pro-seminar will provide a comprehensive foundation for the study of psychology. The course structure will maximize scope and current thinking in each of six cognate areas. Each five-week segment will review current research, theory, application and conceptual structure within a major area of psychology. Considerable attention will be placed on the interface between research and practice. (*Prerequisite: Admission to M.A. in Psychology program or consent of Department*)

PY 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

PY 504 Research (4 crs.)

Original research undertaken by the graduate student in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog. Formerly PY 502

PY 505-506-507 Research Methods and Design I-II-III (3 crs. for each semester)

This course includes three semesters of integrated statistical procedures and research design skills. Special emphasis will be placed on methodological issues that are likely to confront the graduate in applied settings. In addition to covering traditional statistical and design concepts, special applied research tools such as survey methodology, program evaluation "small-N" designs, nonparametric and multivariate models will be presented. The course will be very closely tied to the use of commonly available statistical packages such as SPSS, BMD, ALICE, and STP. The course will reflect a strong experiential component including data collection, analysis and interpretation. (*Prerequisite: Admission to M.A. in Psychology program or consent of Department*)

PY 508 Advanced Seminar (3 crs.)

Various and special topics of current relevance in psychology, to be dealt with in depth, will be offered from time to time. Topics will be announced before pre-registration. May be taken more than once but only three credits will be counted towards the graduate program. (*Prerequisite: Admission to M.A. in Psychology program or consent of Department*)

PY 509 Clinical Prepracticum (3 crs.)

This course will prepare the psychologist/clinician for further didactic and practicum training by systematically considering: 1) diagnosis and assessment issues, 2) systems of psychotherapy, 3) the clinical interviewing situation, and 4) role-model and ethical issues. The DSM-III-R will be introduced and the clinical psychologist's role will be considered in interpersonal, dynamic terms. (*Prerequisite: Matriculation in Psychology MA program or consent of Instructor*)

PY 511 Theories of Psychotherapy (3 crs.)

The major counseling theories are explored in an academic and experiential format. Role playing and videotaping of the theories are common modalities. A sampling of the theories discussed are: Reality Therapy, Behavior Therapy, Rational Emotive Therapy, Gestalt Therapy, Transactional Analysis, Client Centered Therapy and the Psychoanalytic Model. Formerly PY 570. (*Prerequisite: Admission to M.A. in Psychology program or consent of Department*)

*No more than six hours of any combination PY 497, PY 498 or PY 499 may be counted towards the first 33 hours in the psychology requirements for a major.

PY 512 Evaluation Techniques (3 crs.)

The course will begin with traditional components of psychological testing, including test construction, test development, test administration and test interpretation. Specific training will be placed on frequently administered clinical tests (e.g., MMPI, WAIS, and WISC). Beyond traditional test theory, students will be exposed to contemporary evaluation devices including behavioral assessment, interview data and naturalistic observation. Formerly PY 573. (*Prerequisite: Admission to M.A. in Psychology program or permission of Department*)

PY 514 Attitude Change Research (3 crs.)

Empirical research in persuasion; communicator credibility, opinion difference, commitment, one-sided (pro) and two-sided (pro and con) arguments, coercion, threat, emotional and rational arguments. Theories of attitude change, including dissonance theory, balance theory, congruity theory, and assimilation and contrast theory. Formerly PY 512 (*Prerequisite: PY 310, MA 110 or PY 201 or equivalents; consent of the instructor*)

PY 515 Controversies in Social Psychology (3 crs.)

In this seminar, students, working in teams, will present a summary of the research and theoretical literature related to a particular topic in social psychology. The presentation will include research evidence and theories supporting opposing viewpoints. Also included in the presentation will be students' own conclusions based on the weight of the evidence and a suggestion for a specific research study that could help clarify the problem. (*Prerequisite: PY 310 Social Psychology or its equivalent*)

PY 520 Theories of Development (3 crs.)

This course will contrast and compare the major models of development: cognitive-structural, psychoanalytic, and behaviorist, with special emphasis on their a priori assumptions and research strategies. Works of Piaget, Werner, Freud, Erikson, Skinner, Spence, and others will be examined. (*Prerequisite: PY 224, PY 360 or equivalent; consent of the instructor*)

PY 525 Cognitive Development (3 crs.)

The development of the cognitive processes, including perception, language, intelligence, and memory. Throughout the life cycle the major focus will be on the growth of basic systems and strategies for representing information symbolically. The work of cognitive theories such as Berlyne, Bruner, and Piaget will be considered. (*Prerequisite: PY 224 or equivalent; consent of the instructor*)

PY 526 Childhood Psychopathology (3 crs.)

The nature, etiology, consequences and prevention of the major emotional disorders of children, considered from a developmental viewpoint. Areas include emotional problems of normal children as well as serious psychopathology. Primary emphasis is on psychological factors responsible for deviance. Some attention to organic and constitutional factors. (*Prerequisite: PY 224, PY 327 or equivalents*)

PY 528 Seminar in Clinical Child Psychology (3 crs.)

Examination of theoretical foundations and principle techniques used in the assessment and treatment of psychological problems of children. Emphasis will be placed on the unique needs of children in assessment and treatment. (*Prerequisite: PY 224 and PY 327 or PY 526*)

PY 540 Cognitive-Perceptual Psychology (3 crs.)

An in-depth examination and review of the scientific literature concerned with cognitive-perceptual issues, principles, and theories, integrating perception, learning, memory, language, and thinking. Materials will be evaluated with pragmatic regard to experimental, medical, clinical, and educational settings. (*Prerequisite: PY 240, PY 252 or equivalent, or consent of the instructor*)

PY 541 Contemporary Psychoanalytic Theory (3 crs.)

The course is an examination of several of the current psychoanalytic approaches in the treatment of mental illness. Included in the course will be the work of the Object Relations Theorists (English school); those working with borderline conditions such as Masterson, Kohut et. al. and the work of Mahler and other researchers of early psychological experiences. Students who have completed PY 577 may not receive credit for this course. (*Prerequisite: admission to M.A. in Psychology program or consent of department*)

PY 542 Psychodynamic Psychotherapy (3 crs.)

A detailed examination of the application of psychoanalytic theory to the psychotherapeutic setting. The role of interpretation, transference and countertransference, the working alliance and other aspects of the therapeutic relationship will be presented. Formerly PY 578. (*Prerequisite: Admission to M.A. in Psychology program or consent of Department*)

PY 543 Psychodynamic Marital and Family Therapy (3 crs.)

The application of psychoanalytic theory to marital, family and group systems. The examination of interpersonal relationships which are maladaptive and the change strategies and modalities utilized by the therapist. Students who have completed PY 574 may not receive credit for this course. (*Prerequisite: Admission to M.A. in Psychology program or consent of Department*)

PY 551 Advanced Seminar in Personnel (3 crs.)

This course will cover a variety of topics that are important to personnel management and counseling. These topics will include personnel policy formulation and implementation, the use of testing in the industrial setting, the purpose and structure of the interview, the development and implementation of employee assistance programs, etc. Student presentations and/or term papers will be required.

PY 552 Employee Evaluation Techniques (3 crs.)

This course will survey current techniques used in evaluating the training and performance of employees. Appraisal techniques such as employee rating scales, interpersonal ranking methods, and management by objectives will be discussed with particular emphasis on the motivation of employees.

School of Arts and Sciences

PY 553 Theories and Research in the Psychology of Motivation (3 crs.)

This course examines a critical problem in personnel management; namely, how to develop and sustain a high level of motivation among workers. The problem is explored in detail through analysis of psychological theories of motivation and through review of recent research in industrial psychology.

PY 572 Community Psychology and Mental Health (3 crs.)

Examination of principles, literature, and practices of community mental health work and preventive psychiatry. Therapeutic methods in individual, couple, family and group work considered as well as the role of consultation and the community mental health center. (*Prerequisites: PY 360 and PY 370*)

PY 575 Psychopathology (3 crs.)

An examination of the classification, symptoms, and treatment of the types of psychopathology listed in the DSM III-R or its revisions. Special focus will be given to differential diagnosis issues and intervention strategies. (*Prerequisite: Matriculated in Psychology MA program or consent of Instructor*)

PY 576 Transpersonal Psychology (3 crs.)

This course explores alternative models of human consciousness and development which assume that a higher, or transegoic stage of development is possible beyond the stages traditionally investigated by psychology. Examines both Western and Non-Western psychologies, as well as the more contemporary work of Wulber, Washburn, Grof, Jung and others. Special attention will be given to implications for clinical practice. (*Prerequisite: Matriculation in Psychology MA program or consent of Instructor*)

PY 591-592 Internship (3 crs. each semester)

The internship will allow students to apply the skills acquired through classroom work. Students will be placed in mental health agencies or personnel offices and will receive extensive supervision. (*Prerequisite: Admission to M.A. in Psychology program or consent of Department*)



Department of Social Work

Faculty

Chairperson: Associate Professor David Kemple

Professors: Rebecca Leavitt, Betty Reid Mandell

*Associate
Professor:* Anna Martin-Jearld

Instructor: Lucinda King Frode

Undergraduate Programs

Bachelor of Arts/Bachelor of Science

The objective of the social work major is to prepare undergraduate students for beginning professional practice in the field of social work and other human service fields. The program also prepares students for professional education in social work at the graduate level.

The Social Work Department is an accredited program of the Council on Social Work Education. As a result, graduates are eligible to apply for social work licensure at the LSW level under the Commonwealth of Massachusetts. Students who perform at a high level are eligible for consideration for advanced standing at some graduate schools of social work.

The program aims to integrate theory with field experience in a variety of community social service agencies. In SW 398 Junior Year Fieldwork Practice, the students spend a minimum of 90 hours over the course of a semester at an agency learning how it functions and how social workers perform their professional roles within it. The Council on Social Work Education states that this requirement must be fulfilled within an academic setting and that previous work/volunteer experience cannot be used in lieu of this junior year fieldwork practice course. The SW 398 course lays the foundation for the SW 498 Field Experience which is taken from September-May of the student's senior year and entails a minimum of 400 hours under MSW supervision. Students are prepared for beginning professional practice by gradually carrying greater responsibility for a variety of direct services, including advocacy to client populations.

The following criteria have been established as minimum prerequisites for admission and retention in the senior field experience course, SW 498:

1. Documentation that the student has achieved a grade of "C" or better in Writing I and Writing II.
2. Documentation (to be provided by the student to the field placement coordinator before the start of the second semester of the junior year) that the student is maintaining a GPA of 2.2 overall, and a GPA of 2.5 in required social work courses and cognates.
3. Documentation that no more than one "Incomplete" grade will be carried into the senior year (that is, during the year-long field internship) unless satisfactory medical certification supporting the need for same is provided;

School of Arts and Sciences

4. Agreement by a majority of the department faculty that the student gives behavioral evidence of the maturity and mental stability necessary to satisfactorily perform the role of professional social worker.

Social Work Major

SW 227 Policies of Discrimination Towards Women, Minorities, and the Poor

SW 250 Introduction to Social Welfare

SW 320 Human Behavior and Social Environment I

SW 321 Human Behavior and Social Environment II

SW 330 Generalist Practice I

SW 331 Generalist Practice II

SW 332 Generalist Practice III

SW 340 Research Methods in Social Work

or

SO 402 Seminar: Research Methods in Sociology

SW 350 Social Welfare Policy

SW 398 Junior Year Fieldwork Practice

SW 498 Field Experience in Social Work

One social work elective

Required cognates:

PY 100 Introductory Psychology

SO 102 Introduction to Sociology

One additional psychology course

One semester in a human biology course

One social work elective

Social Work Electives:

SW 150 Introduction to Social Work

SW/HE 303 Interdisciplinary Approaches to the
Delivery of Health Services

SW 305 Child Welfare

SW 328 Women and Social Services

SW 333 Social Work with the Aged and Their Families

SW 334 Intervention with Family Systems

SW 335 School Social Work - History, Theory & Issues

SW 337 Social Work with Multicultural and
and Multiethnic Families

SW 399 Special Topics in Social Work

SW 403 Social Services in the Health Care Field

SW 415 Social Services in Alcohol and Substance Abuse

SW 499 Directed Study in Social Work

Social Welfare Minor

This minor seeks to acquaint students in majors, concentrations, and pre-professional programs that interface with Social Work (e.g., Health, Education, Counseling, Business, Pre-Law, Pre-Medicine, Recreation) with the evolution of the social welfare structure in the United States (SW 250), the policies that result in Social Welfare programs (SW 350), the populations at particular risk (SW 227) Policies of Discrimination Towards Women, Minorities and the Poor.

SW 227 Policies of Discrimination Towards Women, Minorities, and the Poor

SW 250 Introduction to Social Welfare

SW 330 Generalist Practice I

SW 350 Social Welfare Policy

Six additional credits in social work elective courses with the exceptions of SW 398 and SW 498

Graduate Program

Social work courses, at the 300 and 400 level (except SW 498 and SW 499) may be taken for graduate credit in order to meet elective requirements in other graduate programs with faculty adviser's approval.

Course Offerings*

None of these courses may be used to satisfy general education requirements, but may serve as elective credit.

SW 150 Introduction to Social Work (3 crs.)

This course is designed to provide non-majors with an introduction to the activities, responsibilities and roles which are characteristic in the field of social work. In the classroom, learners will have an opportunity to meet a number of experienced practitioners who will serve as guest lecturers and who will provide information on a broad variety of contemporary social work modalities. In addition, field visits to social service facilities, both public and private, will be included in the course plan. Students will become familiar with the client population and the range of client needs currently prevalent in southeastern Massachusetts, and they will make first-hand observation of the ways in which human services are being delivered to meet those needs. *Either semester*

SW 227 Policies of Discrimination Towards Women, Minorities, and the Poor (3 crs.)

The study of the special knowledge and sensitivity necessary for social workers in serving women, minorities, and the poor. Social work practice, social policy and social services will be examined in relation to class, gender, and ethnicity. *(Prerequisite: SW 250) Either semester*

SW 250 Introduction to Social Welfare (3 crs.)

Analysis of the conceptions of social welfare, the historical development and function of social welfare and the value systems underlying the political, economic and social response to human needs. An overview of the roles of the social worker and the varied settings in which interventions are employed. *(Prerequisite: PY 100 or SO 102) Either semester*

SW/HE 303 Interdisciplinary Approaches to the Delivery of Health Services (3 crs.)

A wide range of interdisciplinary health team approaches will be analyzed. The field component is observational and will provide insight into the pragmatic realities of a health team. This course will be a first exposure to the theoretical and experiential dynamics of interdisciplinary approaches to delivery of health services. Disciplines involved include social work, health, psychology, nursing and medicine. *(Prerequisite: 6 credits in Health and Social Work or Health-related areas) Offered once in three years*

SW 305 Child Welfare (3 crs.)

A comprehensive study of the principle child welfare services. The course will concentrate on the human service practitioner's role as a helping agent in the delivery of services. The impact of child welfare on areas of education, sociology, psychology, health and mental health will include aspects of these disciplines as they relate to enhancing the welfare of the child. Learners will make site visits to child welfare agencies and interview professionals providing services to children. *(Prerequisite: SW 250 or consent of the instructor) Either semester*

SW 320-321 Human Behavior and Social Environment I-II (3 crs. for each semester)

This sequence examines the effects of biological, psychological and socio-cultural factors upon human behavior throughout the life span. Using an ecological perspective and social systems approach, this sequence chronologically explores normal human development. Human diversity, the various issues which may impel persons to maladaptive behavior, and the ways in which individuals shape and are shaped by their interactions with one another and within social institutions are all areas of focus in the sequence. *(Prerequisite: SW 250 and a biology course) Fall and spring semesters*

SW 328 Women and Social Services (3 crs.)

This course will focus on women in social services, both the clients and the workers. It will deal with issues and services particularly pertinent to women, including shelters for battered women, rape crisis centers, women's health centers, and the influence of women's studies on social welfare theory. This course is an elective course in the Women's Studies minor. *Either semester*

SW 330 Generalist Practice I (3 crs.)

This course initiates the study of entry-level generalist social work practice with all client systems and with particular attention on human diversity and oppressed populations. The topics covered: social work knowledge and values, agency role and function, the helping relationship, the problem-solving process through the phases of initial assessment, and special skills, e.g. communication management and interviewing. Approved for certification for Massachusetts School Adjustment Counselor. *(Prerequisite: SW 250 and SW 320) Either semester*

SW 331 Generalist Practice II (3 crs.)

This course will integrate knowledge of assessment skills and intervention approaches that will enable client systems to adapt more effectively with both internal social and political pressures in their life situations. Strategies will be drawn from generalist practice with particular emphasis upon women, minorities, and other underserved populations. *(Prerequisites: SW 250, SW 320, SW 321, SW 330) Either semester*

SW 332 Generalist Practice III (3 crs.)

This course deepens and expands generic social work skills and applies them to macro-level analysis and intervention in organizations and communities. *(Prerequisites: SW 250, SW 320, SW 321, SW 330, and SW 331) Either semester*

SW 333 Social Work with the Aged and Their Families (3 crs.)

The course affords the student an understanding of what it means socially, psychologically and physically—to be aging in our society. Theories and methods of problem-solving with the elderly are examined. The elderly's income, health, housing, social service and other needs are identified and analyzed as are the policies and programs to address these needs. *(Prerequisite: 6 credits in Behavioral Sciences or Health) Either semester*

*See pages 75-76 for general information regarding course offerings.

School of Arts and Sciences

SW 334 Intervention with Family Systems (3 crs.)

Students will learn to conceptualize personal and interpersonal phenomena from a family systems perspective, to think in terms of circular rather than linear causality, and to recognize patterns and sequences. Major theoretical family systems approaches will be presented, as well as basic intervention techniques. *Either semester*

SW 335 School Social Work--History, Theory and Issues (3 crs.)

The course will begin by examining the school as an ecological unit created to educate and socialize children. The evolution of school social work within this system will be traced from its inception in 1906 to the present. The three traditional models of school social work will be explored: home/school linkage, direct service provider, and team member. Issues of confidentiality, team building and assessment and referral will be discussed. The student will acquire an understanding of the application of the social work methods of casework, groupwork, and community organization as practiced in the school with well children in crisis and with special populations and problems. Approved for certification for Massachusetts School Adjustment Counselor. *(Prerequisites: SW 250 and SW 330 for Social Work majors; SW 250 and Instructor's consent for non-majors) Either semester*

SW 337 Social Work with Multicultural and Multiethnic Families (3 crs.)

This course examines social work practice with culturally and racially diverse families through study of relevant theory, case studies and the identification of personal issues and values. This course also examines contemporary issues as they affect social service delivery to families made vulnerable because of ethnic, cultural or racial biases. *(Prerequisite: 9 hours in Behavioral Sciences)*

SW 340 Research Methods in Social Work (3 crs.)

This course is designed to help social work students develop an understanding of social research methods and equip them with the tools to measure the effectiveness of their practice and the quality of the services provided by human service agencies. The ethics, politics and utility of social research methods in all aspects of social work practice is explored. Particular emphasis is placed on research methods and applications unique to social work such as single-subject design studies, human services program evaluation, and advocacy research. *(Prerequisite: SW 250 and 9 hours in Behavioral Sciences)*

SW 350 Social Welfare Policy (3 crs.)

This course follows the development of social welfare institutions and the societal response to human service needs. There is discussion of poverty and its effects on minority groups with special emphasis on Afro-Americans, Spanish-speaking, women and the aged. Students are helped to analyze social policy. *(Prerequisite: SW 250 or consent of the instructor) Either semester*

SW 398 Junior Year Fieldwork Practice (3 crs.)

The Junior Fieldwork practicum complements the student's academic work through a minimum of 90 hour practical experience in a social work agency under professional supervision. The student is introduced to social work tasks while applying theory to actual social work situations. This experience

is reinforced through a weekly seminar where theory and practice will be integrated and student field experiences are shared. The department requires that SW 320 and SW 330 be taken prior to or concurrently with this practicum.

SW 399 Special Topics in Social Work (3 crs.)

Various topics in Social Work will be offered from time to time. Topics will be announced prior to registration. May be taken more than once. *(Prerequisite: 9 hours in Behavioral Sciences) Either semester*

SW 403 Social Services in the Health Care Field (3 crs.)

The course will provide an historical overview of medical social work with emphasis upon the psychological and social aspect of medical care. A variety of health care settings will be analyzed in terms of social work role, treatment approaches, resource finding and interdisciplinary work. Students will be given an understanding of how both acute and chronic illness affect the patient, family and community with emphasis upon such variables as age, sex, ethnicity, and duration and nature of condition. *(Prerequisite: At least 6 hours at 300, 400 level Behavioral Sciences or Health. Open to declared majors in Behavioral Sciences or Health) Fall semester*

SW 415 Social Services in Alcohol and Substance Abuse (3 crs.)

The course provides an overview of the problem of alcoholism, and the various programs that deal with the problem. It has been designed primarily for students who have an interest in the area of alcoholism and substance abuse and either may be considering a career in treatment for alcoholism or may merely wish to expand their area of competence. The course focuses on the central issues of causation, resources, management and treatment from a social work perspective. Students need to understand how the various programs and human service systems are planned, organized and evaluated. Students are introduced to theory and practice in relation to the functions that form the basis of various programs and services. Agency visits will be made. *(Prerequisite: SW 250) Either semester*

SW 498 Field Experience in Social Work (4 crs. for each semester)

The field experience provides opportunities for students to learn how to apply knowledge and to develop skills in direct services to clients under the direction of a qualified agency field instructor. A minimum of 400 hours is spent in a wide variety of community agencies from September-May of the senior year. This experience continues to build upon the practical sequence of SW 330, SW 331, and SW 332. A weekly seminar throughout the year allows students to integrate social work theory and practice into a unified whole as part of their development as beginning professional practitioners. *(Prerequisites: Social Work Majors only and SW 320, SW 321, and SW 330) Either semester*

SW 499 Directed Study in Social Work (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. *(Prerequisite: consent of the department; formal application required) Either semester*

Department of Sociology and Anthropology

Faculty

Chairperson: Associate Professor Walter Carroll

Professors: Donald Armfield, Curtiss Hoffman,
William Levin, Howard London,
Nancy Meymand, Reed Stewart,
Abraham Thomas

Associate Professors: Richard Henry, Sandra Faiman-Silva

Undergraduate Programs

Anthropology

Bachelor of Arts/Bachelor of Science

A major in Anthropology provides students with an understanding of societies and cultures throughout the world. Specifically: 1) A major prepares students for teaching careers in either elementary or secondary schools and/or for college teaching or research. 2) It prepares students for careers in industry. 3) It offers a general background to students who are interested in jobs with state or federal agencies. 4) It provides a background for students to become educated, well informed adults. Majors are encouraged to continue study for advanced degrees (M.A. or Ph.D.) because those individuals are more likely to be selected for positions in the field.

A concentration in public archaeology is designed to provide the basic knowledge and training necessary for careers in contract archaeology and cultural resource management. The program introduces students to the history of the development of public archaeology and to the study of federal, state and local legislation protecting archaeological resources. The concentration relies heavily on cognate courses in geology and geography.

Anthropology Major

a) Cultural Anthropology Concentration

AN 100 Introduction to Cultural Anthropology
AN 101 Introduction to Physical Anthropology
AN 103 Introduction to Archaeology
AN 400 Anthropological Theory

plus one course from:

AN 206 Native Cultures of North America
AN 209 Peoples and Cultures of Africa
AN 213 Latin American Peoples and Cultures
AN 321 Comparative Social Structures
SO 210 Society and Culture in Modern India
SO 214 Middle Eastern Societies
SO 217 East Asian Societies: China and Japan
SO 221 Religion and Society in Modern Asia

plus five other anthropology courses, at least three of which must be at the 300 level or above.

Cognate requirement:

SO 403 Seminar: Social Data Analysis

School of Arts and Sciences

b) Public Archaeology Concentration

AN 100 Introduction to Cultural Anthropology
AN 101 Introduction to Physical Anthropology
AN 103 Introduction to Archaeology
AN 206 Native Cultures of North America
AN 328 Archaeology of North America
AN 400 Anthropological Theory
AN 410 Public Archaeology
plus nine credits of field or laboratory work in archaeology (any combination of AN 303, AN 332, and Directed Study or Internship)
plus one other anthropology course
Cognate requirements:
SO 403 Seminar: Social Data Analysis
ES 100 Physical Geology
plus four courses from:
ES 101 Historical Geology
ES 102 History of the Earth
ES 194 Environmental Geology
ES 476 Sedimentology and Stratigraphy
GE 196 Environmental Geography
GE 216 Cartography
GE 217 Air Photo Interpretation—Remote Sensing
GE 307 Management and Preservation of the Natural Environment

Double Major With Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in Anthropology and Elementary Education, Early Childhood Education or Special Education for certification purposes. Appropriate advising materials with suggested course sequences are available.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific teacher certification and program requirements.

Anthropology Minor

Anthropology minors are advised to take the following courses.

Any two of:

AN 100 Introduction to Cultural Anthropology
AN 101 Introduction to Physical Anthropology
AN 103 Introduction to Archaeology

plus any one of:

AN 206 Native Cultures of North America
AN 208 Anthropology of Women
AN 209 Peoples and Cultures of Africa
AN 213 Latin American Peoples and Cultures
plus any four other anthropology courses.

Sociology

Bachelor of Arts/Bachelor of Science

Human beings interact in several ways with other human beings and construct patterns of relationships, groups, classes, institutions, and societies. We are individuals but necessarily participate in and are shaped by the large number of relationships that constitute social reality. The sociological perspective focuses on these social relationships.

The objective in all courses is to provide the student with an understanding of how these social relationships arise, why they persist, what effects they have, how they maintain social order or contribute to social change. This understanding is provided by means of classroom learning of the theories and methods of research used by the practitioners of sociology and/or by internship practices in the field, where the student is expected to apply or deepen classroom learning. This objective is designed to facilitate the student's entrance into the labor market or graduate school.

Sociology Major

SO 102 Introduction to Sociology
SO 400 Seminar: Social Theory
SO 402 Seminar: Research Methods in Sociology
SO 403 Seminar: Social Data Analysis
plus a minimum of seven other courses in sociology

Sociology and Anthropology

Double Major with Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in Sociology and Elementary Education, Early Childhood Education or Special Education for certification purposes. Appropriate advising materials with suggested course sequences are available.

Sociology Minor

18 credits in Sociology as recommended by the department.

Criminology Concentration

The Sociology Major with a concentration in Criminology is designed for students who are considering possible careers in the diverse area of the administration of justice. The program introduces and sensitizes students to the different dimensions and explanations of crime and delinquency, and provides analyses of structural sources and the legislative process involved in the formulation of the criminal law.

Requirements:

- SO 102 Introduction to Sociology
- SO 304 Social Stratification: Class, Status and Power in America
- SO 327 Deviance and Social Control
- SO 328 Criminology
- SO 400 Seminar: Social Theory
- SO 402 Seminar: Research Methods in Sociology
- SO 403 Seminar: Social Data Analysis

Any three of the following courses:

- SO 334 White Collar Crime
- SO 354 Sociology of Corrections
- SO 355 Juvenile Delinquency
- SO 384 Criminal and Delinquent Behavioral Systems
- SO 385 Victimology: Sociology of Victims

A field work placement assignment of 6 hours is required.

Cognate requirements:

- HE 405 Drugs in Society
- PY 369 Psychology of Criminal Behavior

Third World Studies Concentration

Students selecting this concentration will study selected Third World societies: their institutions, social structure, development and changing place in the world.

Requirements:

- SO 102 Introduction to Sociology
- SO 104 Global Human Issues
- SO 220 Third World Societies
- SO 400 Seminar: Social Theory
- SO 402 Seminar: Research Methods in Sociology
- SO 403 Seminar: Social Data Analysis

One course from the following:

- SO 219 Population and Society
- SO 340 Sociology of Politics
- SO 335 Social Change

Three courses from among:

- (at least one must have a SO prefix)
- AN 206 Native Cultures of North America
- AN 209 Peoples and Cultures of Africa
- AN 213 Latin American Peoples and Cultures
- SO 210 Society and Culture in Modern India
- SO 214 Middle Eastern Societies
- SO 217 East Asian Societies: China and Japan
- SO 221 Religion and Society in Modern Asia

Required cognate:

- AN 100 Introduction to Cultural Anthropology

Two courses from among a list of 23 electives from various departments. Consult the Department of Sociology and Anthropology for further information.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific teacher certification and program requirements.

School of Arts and Sciences

Graduate Programs

Appropriate courses in anthropology and sociology may be taken, with faculty adviser approval, in the Master of Arts in Teaching and CAGS programs in Behavioral Sciences. For detailed information regarding these graduate programs, contact the Graduate School.

The departmental offerings listed below include courses which may not be taken for graduate credit:

All anthropology and sociology courses below the 300 level

AN 498 Field Experience in Anthropology

AN 499 Directed Study in Anthropology

SO 330 Woman's Roles: Sociology of Sex and Gender

SO 498 Field Experience in Sociology

SO 499 Directed Study in Sociology



Course Offerings*

Anthropology

AN 100 Introduction to Cultural Anthropology (3 crs.)

This course introduces basic anthropological concepts and methods of cultural analysis. The problems of ethnocentricity and human cultural variability in human societies of different times and places will be studied. Satisfies the GER in Behavioral Sciences. *Either semester*

AN 101 Introduction to Physical Anthropology (3 crs.)

This course covers the following areas: divisions of anthropology, theories and principles of evolution, primate and hominid evolution and behavior, origins of hominid physical and cultural development and concepts of racial variation. Satisfies the GER in Behavioral Sciences. *Either semester.*

AN 103 Introduction to Archaeology (3 crs.)

This course examines research methods, systems of data recording and analysis and reconstruction of cultural lifeways of past cultures. The conceptual bases of the study of the past are explored through material culture. Satisfies the GER in Behavioral Sciences. *Offered alternate years. Fall semester*

AN/SO 104 Global Human Issues (3 crs.)

This interdisciplinary course treats major world problems with particular emphasis upon those faced by non-Western peoples. The interdependence between economically developed and underdeveloped parts of the world will be explored according to such themes as collective versus individual good, short versus long-term planning and cooperation versus competition. Satisfies the GER in Non-Western Civilization. *Spring semester*

AN 110 Introduction to Folklore (3 crs.)

This course explores the meanings and subdivisions of folklore: myth, folktale, proverb, riddles and folklife. It covers the analysis of story elements, major folklore areas, and the role of folklore and folklife in society and culture. Satisfies the GER in Behavioral Sciences. *Either semester*

AN 111 Myth and Culture (3 crs.)

This course introduces the cross-cultural approach to world mythology. Myths of our own and other cultures will be analyzed using several theoretical approaches. Myth will be examined as a fundamental human function, necessary for the well-being of cultures. Satisfies the GER in Behavioral Sciences. *Fall semester.*

AN 206 Native Cultures of North America (3 crs.)

This cross-cultural course studies the tribal cultures of the United States, Canada and Mexico. Emphasis will be placed on developing an understanding of Native American cultural systems in their traditional settings and on the current status of Native American interaction with government policies and attitudes. Satisfies the GER in Non-Western Civilization. *Spring semester*

AN 208 Anthropology of Women (3 crs.)

This course will investigate the relative status of women cross-culturally in a range of non-western settings, including hunter-gatherer bands, horticultural societies, peasantry, nomadic pastoralists and contemporary industrial societies. Women will be examined as they relate to economic resources, political power and authority, kin and non-kin and in religion, myth and lore. Students will analyze conceptually and through cross-cultural data what is meant by sex roles, how they vary cross-culturally and how they are negotiated and maintained. Satisfies the GER in Non-Western Civilization. *Offered alternate years*

AN 209 Peoples and Cultures of Africa (3 crs.)

A survey of the multiplicity of ways in which contemporary societies, rural and urban, arrange their ways of life in a rapidly changing Africa. Satisfies GER in Non-Western Civilization. (Prerequisite: AN 100) *Offered once every three years, spring semester*

AN 213 Latin American Peoples and Cultures (3 crs.)

This course will investigate the culture, history and development of selected Latin American regions and their contemporary relations with the United States. Mexico/Guatemala and Central and South America will be studied by means of ethnographic and cross-cultural documents of the past and present which reveal changing conditions of society, land ownership, ethnicity and political allegiance. Satisfies the GER in Non-Western Civilization. (Prerequisite: AN 100 or consent of the instructor) *Offered alternate years*

AN 303 Archaeological Field Excavation in Prehistoric Sites in New England (2-6 crs.)

Intensive training in excavation techniques, field recording, and primary cataloguing and analysis of archaeological materials. (Prerequisite: consent of the instructor) *Offered in summer only*

AN 304 Personality and Culture (3 crs.)

A study of the interrelationships between individual and society, focusing on major theories about the formulation of personality by the surrounding structures, including a cross-cultural study of childhood; adolescence in changing American personality as compared with personality structures in traditional societies. (Prerequisite: AN 100 or consent of the instructor) *Offered once every three years*

*See pages 75-76 for general information regarding course offerings.

School of Arts and Sciences

AN 305 Culture Change (3 crs.)

This course focuses on the processes of culture change, intentioned and unintentioned, internal and external. It will explore reaction strategies of cultures toward imminent change. The course concludes with a consideration of how models can be applied to producing non-destructive, non-exploitative culture change. Formerly AN 205. (Prerequisite: AN 100, AN 101, AN 103 or consent of the instructor) Offered alternate years, spring semester.

AN 306 Urban Anthropology (3 crs.)

The study of urban culture using anthropological fieldwork methods. Offered once every three years

AN 307 Anthropology of Religion (3 crs.)

The origins and development of religion in society; myth, ritual, magic, and religious specialists. Australian, African, and American Indian. Formerly AN 107. Offered alternate years, fall semester

AN 309 Anthropology of Art (3 crs.)

This course will consider particular art forms in their cultural contexts. It will begin with forms considered conventional by Western standards - painting and sculpture - and examine them in prehistory and in non-Western contexts. Then the artistic properties of crafts and other types of production not usually accepted as art will be studied: masks, pottery, tools, house plans, arrangements of objects, and ritual. The role and philosophy as well as the mystique of the artist will be contrasted in a number of contexts. The imposition of Western art ideology on native cultures, the creation of syncretic and tourist art will be used to epitomize the ongoing interests of anthropology of art. Offered once every three years, spring semester

AN/SO 315 Ethnic Experience in America (3 crs.)

This course considers the role of ethnic background in personal and social relationships. The varying interpretations of ethnic culture—its formation and growth in America—are examined while each student looks into his or her personal heritage and the role of tradition in contemporary life. Offered alternate years, spring semester

AN 321 Comparative Social Structures (3 crs.)

A comparison of social structures of selected non-Western societies. Stress is placed upon the meaning of society, structure, and analytical methods of comparison. (Prerequisite: AN 100) Fall semester

AN 322 War, Peace and Culture (3 crs.)

This course proceeds from the premise that while conflict of some sort is inevitable within and among human cultures, war is not. By investigating the origins, control and resolution of conflict in a variety of cultures, the course creates an opportunity to study war and the possibilities of peace. Offered alternate years, spring semester

AN 328 Archaeology of North America (3 crs.)

The development of prehistoric and proto-historic Native American cultures. Cultural dynamics of hunting-gathering and maize agriculture. Theories of the peopling of the continent will be evaluated. (Prerequisite: AN 103 or consent of the instructor) Offered alternate years, fall semester

AN 330 Medical Anthropology (3 crs.)

The course concentrates on health, illness, and healing in cross-cultural perspective. It will examine ways in which culture mediates ideas of physical well-being, and will be aimed at dispelling belief in the absolute truth of medical dogma, teaching students to think outside their own cultural biases. It begins with a consideration of body image in a range of different cultures and then proceeds to the varying rationales for normal function and for dysfunction. The healing process as ritual and as scientific procedure, including the theory and practice of healing in different cultures, figures into the course as does the training and outlook of healers—doctors, priests, shamans, nurses, midwives, and others. Finally, the medical systems of several cultures, ancient and modern, industrialized and pre-industrial are compared. Offered alternate years, spring semester

AN 332 Practicum in Field Archaeology (1-3 crs.)

Experiential training in the practical skills of field archaeology. Direction in site survey, excavation tactics and strategy, fieldwork supervision, methods of sampling and on-site analysis. Introduction to laboratory work: cataloguing, recognizing lithic materials, metric measurement, and flotation of organic samples. (Prerequisite: AN 103 (to be taken concurrently), AN 303, or consent of the instructor)

AN 340 Myths and Peoples of the Ancient Near East (3 crs.)

This course will explore the dimensions of myth as they relate to the cultural life of the peoples of the Ancient Near East: the Egyptians, the Sumerians, the Babylonians and Assyrians, the Hittites, the Phoenicians and the Hebrews. Emphasis will be placed on understanding the context out of which the myths arose, and the ways in which they both described and conditioned the cultural realities to which they related. (Prerequisite: AN 100 or AN 110 or AN 111 or AN 307) Offered every three years

AN 345 Cooperation in Cultures (3 crs.)

This course introduces the idea of cooperation as a cultural form. Beginning with the theory of cooperative behavior from the social contract to mutual aid and solidarity, it continues to examine a number of cooperative possibilities in different cultures, including programs for sharing resources, pan-cultural movements and internationalism. Offered alternate years, fall semester

AN 350 Special Topics in Anthropology (3 crs.)

Various special topics of current interest in anthropology will be offered from time to time. Topics will be announced before pre-registration. May be taken more than once but only three credits will be counted toward the first 30 hours of the major. (Prerequisite: One anthropology course or consent of the instructor)

Sociology and Anthropology

AN 400 Anthropological Theory (3 crs.)

This course is a survey of the foundations of cultural and archaeological theory, including cultural evolutionism, structuralism, American historical-particularism, British functionalism and structural-functionalism, French structuralism, and current directions in American, European and Third World anthropological thought. Theories of archaeology will also be examined, including traditional evolutionary perspectives; the New Archaeology, and contemporary critiques, drawing upon social systems analysis. (*Prerequisites: AN 100 and AN 101 or AN 103*)

AN 410 Public Archaeology (3 crs.)

An introduction to Public Archaeology, its history of development. Emphasis will be placed on the basic knowledge and training necessary for careers in contract archaeology and cultural resource management: 1) to introduce students to the history of the development of public archaeology; 2) to study the federal, state, and local legislation protecting archaeological resources; 3) to provide administrative training for doing contract archaeology - contract and research proposal development, report writing, Environmental Impact Statement interpretation - and to provide a basic background for cultural resource management careers. (*Prerequisite: AN 103 or consent of the instructor*) *Offered alternate years, spring semester*

AN 498 Field Experience in Anthropology (3-15 crs.)

The field experience provides an opportunity for students to apply methods of fieldwork in ongoing societies; to design field studies; to learn methods for collection and analysis of empirical data; and to participate in experimental field projects. (*Prerequisite: consent of the instructor; formal application required*)

AN 499 Directed Study in Anthropology (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department; formal application required*)

Other Approved Courses:

AN 311 The Emergence of Cities

AN 333 Archaeological Theory

AN 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

AN 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

AN 510 Symbolic Anthropology (3 crs.)

The course considers symbols in the context of anthropological theories of culture, and is divided into two sections: on the nature of symbols and on the symbolic analysis of cultural institutions. The origin of symbols, their universality and variability are taken up in the first section while their role in ritual, language, social organization and other cultural systems is studied in the second section. (*Prerequisite: AN 100 or any introduction to cultural anthropology*)

AN 520 Ethnographic Film (3 crs.)

The course compares written ethnography with the increasingly important medium of film ethnography and identifies the unique features of film as a means of communicating conclusions about culture. Emphasis is on the attributes of ethnography on film: viewpoint, editing, time sequence, setting, documentation. Students will read ethnographies and view selected films presenting the same cultures.

AN 525 Problems of New England Archaeology (3 crs.)

An intensive seminar in local prehistory, exploring the cultural and environmental evidence for settlement and subsistence patterns in the Northeast. Important considerations will include how we know what we know, and why we currently do not know more about the prehistoric inhabitants of this area. Individual research papers will be assigned. (*Prerequisite: AN 103, AN 303, AN 328, or equivalent*)

AN 526 Cultural Resource Management (3 crs.)

For graduate students seeking employment in the field of conservation archaeology. A detailed survey of the techniques and importance of cultural resource management, including archival research, field strategies, conservation of finds, report writing, and archaeological legislation. Individual research papers will be assigned. (*Prerequisite: AN 103, AN 303, AN 333, AN 410 or equivalents*)

AN 590 Seminar: Community Cultures in Southeastern Massachusetts (3 crs.)

Examination of cultural traditions, changing beliefs and institutions, current folklore, and oral traditions in relation to specific ethnic, political, and economic groupings in southeastern Massachusetts.

School of Arts and Sciences

Sociology

SO 102 Introduction to Sociology (3 crs.)

This course covers such areas as social structure, basic human institutions, analysis of social processes and major social forces. Satisfies the GER in Behavioral Sciences. *Either semester*

SO 103 Social Problems (3 crs.)

Contemporary social problems which are reflected in the behavior of individuals, but whose origins and causes lie outside of individuals. Topics treated will include drug abuse, crime, juvenile delinquency, divorce and other family problems, mental illness and other health problems, social class, and selected social issues. Satisfies the GER in Behavioral Sciences. *Either semester*

SO/AN 104 Global Human Issues (3 crs.)

This interdisciplinary course treats major world problems with particular emphasis upon those faced by non-Western peoples. The interdependence between economically developed and underdeveloped parts of the world will be explored according to such themes as collective versus individual good, short versus long-term planning and cooperation versus competition. Satisfies the GER in Non-Western Civilization. *Spring semester*

SO 108 Sociology of Religion (3 crs.)

Comparative study of religious systems and institutions; function and role of religion and the church in society; professional status, history and relations of the clergy. Satisfies the GER in Behavioral Sciences. *Offered alternate years, spring semester*

SO 210 Society and Culture in Modern India (3 crs.)

This descriptive and analytical examination of societies of the Indian subcontinent deals with their cultural histories and their economic, social, political and religious institutions. Problems of cultural and social change are treated. Satisfies the GER in Non-Western Civilization. *Offered once every three years.*

SO 212 Discrimination and Prejudice (3 crs.)

This course is a study of the relationship between majority and minority groups in America, with attention to the domination of categories of people on the basis of their race, sex, age, ethnicity and/or religion. Theories and data will be presented concerning the development, maintenance and operation of discrimination and prejudice, and the relationship between them. Satisfies the GER in Behavioral Sciences. *Fall semester*

SO 214 Middle Eastern Societies (3 crs.)

This course introduces the cultures and social structures of Middle Eastern Societies, with a focus on social change in the region. Topics covered include the role of Islam, patterns of leadership, the distribution of wealth and power, family patterns, the position of women, and the nature of work. Satisfies the GER in Non-Western Civilization. *Fall semester*

SO 217 East Asian Societies: China & Japan (3 crs.)

This course examines the cultural and social structure of traditional and modern China and Japan. The course will focus on topics such as work and economy, rural-urban contrasts, family and kinship, the position of women, and the relationships between state and society. The course will conclude with an assessment of the positions of these two societies in the contemporary world. Satisfies the GER in Non-Western Civilization (*Prerequisite: SO 102 or AN 100*) *Spring semester*

SO 219 Population and Society (3 crs.)

This course describes the mutual influence of demography and social structure. Trends in population growth and their effect on industrialization and urbanization will be covered in the context of developed and Third World nations. Satisfies the GER in Behavioral Sciences. *Spring semester.*

SO 220 Third World Societies (3 crs.)

This course introduces the sociological aspects of development in the Third World and the role of the West in that process. Industrialization, urbanization, education, the "Green Revolution," population growth, class structure, political structure, etc., are related to development. Satisfies the GER in Non-Western Civilization. *Fall semester*

SO 221 Religion and Society in Modern Asia (3 crs.)

The interrelationships between religion and social change will be discussed with particular reference to Japan, India and Ceylon and to other selected Asiatic countries. The major characteristics of Islam, Hinduism and Buddhism will be studied in relation to their effect on society. Satisfies the GER in Non-Western Civilization. *Offered alternate years*

SO 303 The Family (3 crs.)

The family as a social institution in terms of its historical and cultural development. Analysis of psychological and social factors in contemporary family life. *Either semester*

SO 304 Social Stratification: Class, Status and Power in America (3 crs.)

Historical and contemporary examples of the range of stratification systems. Problems of class and caste conflicts. Trends in class system and social mobility, with special attention given to similarities and differences of modern industrial societies. *Fall semester*

SO 305 Sociology of Education (3 crs.)

This course examines schools as social organizations, the culture of schools, the relationships between education and social stratification, and the sociology of educational reform. All levels of education are considered, from kindergarten through higher education. *Spring semester*

SO 306 Cities and People: Urban Sociology (3 crs.)

This course examines cities and urbanization in comparative perspective. It will also focus on changing urban social structures, the nature of city life, urban planning, and grassroots participation in urban change. (*Prerequisite: SO 102*) *Offered alternate years, spring semester*

Sociology and Anthropology

SO 307 Medical Sociology (3 crs.)

Concepts of health, illness, disease, and health care analyzed from the perspectives of patient (client), practitioner and relevant third parties. Medicine will be analyzed as a social system, with attention to factors in the physical and sociocultural environment, and case materials will be drawn from non-Western as well as Western societies. *(Prerequisite: SO 102, or consent of the instructor)* Offered alternate years, fall semester

SO/AN 315 Ethnic Experience in America (3 crs.)

This course considers the role of ethnic background in personal and social relationships. The varying interpretations of ethnic culture—its formation and growth in America—are examined while each student looks into his or her personal heritage and the role of tradition in contemporary life. Offered alternate years, spring semester

SO 326 Social Gerontology - Sociology of Aging (3 crs.)

This course will focus on aging in America as a social problem. Topics covered will include reasons for the view of aging as a problem, the impact of aging on individuals and society, sociological theories of aging, and proposed ways of alleviating or eliminating aging as a problem. *(Prerequisite: SO 102)* Spring semester

SO 327 Deviance and Social Control (3 crs.)

This course examines deviant acts with an eye toward understanding social order and change. Topics covered include the types and causes of deviance, the social conditions and elements of deviant acts, and the effects of deviance and mechanisms for prevention, punishing, and rehabilitating deviant individuals and groups. *(Prerequisite: SO 102, or consent of the instructor)* Fall semester

SO 328 Criminology (3 crs.)

This course will be concerned with theories of crime causation, and perspectives on administration, treatment, prevention, and prediction. Consideration will be given to the influence of social class and other factors in criminal behavior. *(Prerequisite: SO 102, or consent of the instructor)* Fall semester

SO 329 Public Opinion and Mass Media (3 crs.)

Principles of mass communication and public opinion will be discussed from the point of view of the source of a message, the message itself, the audience, the channel through which the message proceeds and the effect of the message. *(Prerequisite: SO 102, or consent of the instructor)* Offered once every three years

SO 330 Woman's Roles: Sociology of Sex and Gender (3 crs.)

An analytical study of the relation of sex to power and influence in society. Differentiation in sex roles as affected by the economy and reinforced by other institutions. New alternatives for women. Spring semester

SO 332 Sociology of Organizations (3 crs.)

Analysis of the emergence, structure, function, culture and social significance of complex organizations. Emphasis will be placed upon the results of research in hospitals, schools, prisons, and military and industrial organizations. Attention will be given to informal associations and organizational change. *(Prerequisite: SO 102, or consent of the instructor)* Fall semester

SO 333 Resolving Conflict (3 crs.)

An introduction to the sociology of alternate conflict resolution. The course studies the structure and process of social conflict, and analyzes alternate dispute resolution processes, including negotiation, mediation, and the Ombudsman. Will examine the role of the mediator in depth. *(Prerequisite: SO 102, or consent of the instructor)* Offered alternate years.

SO 334 White Collar Crime (3 crs.)

Broadening the definition of crime, this course will study the behavioral systems involved in the commission of white collar crimes in complex structures, such as government bureaucracies, multi-national corporations, and underground systems. The modern institutional factors—political and social—permitting or restricting the commission of such crimes will be investigated. Specifically, the performance of the criminal justice system will be examined. *(Prerequisite: SO 102)* Spring semester

SO 335 Social Change (3 crs.)

Sources, patterns, spheres, levels, processes, policies of social change. Classical, neo-classical, modern theories in the field. The course emphasizes the above as related to contemporary societies. *(Prerequisite: SO 102, or consent of the instructor)* Offered alternate years, fall semester

SO 340 Sociology of Politics (3 crs.)

A study of the state, political practices, power, and theories in the field. The emphasis is on the sociological conditions under which the above phenomena evolve. *(Prerequisite: SO 102, or consent of the instructor)* Offered alternate years, fall semester

SO 350 Sociology of Work (3 crs.)

An analysis of the occupational system as affected by the "non-economic" institutional factors. Changes in the occupational structure and the class structure; employers and trade unions; managers and workers; work situation and the life situation; professionalization and "white collar unionism." Spring semester

SO 354 Sociology of Corrections (3 crs.)

Analysis of the social structures and processes involved in dealing with individuals who have been designated as offenders of criminal law. Probation, prison, parole, programs of prevention and rehabilitation. *(Prerequisite: SO 328)* Fall semester

School of Arts and Sciences

SO 355 Juvenile Delinquency (3 crs.)

Analysis of the nature and types of juvenile behavior that violates law; the mechanisms of defining such behavior as delinquent; and the relationship between delinquency and the social situations of juvenile offenders. (*Prerequisite: SO 102*) *Fall semester*

SO 384 Criminal and Delinquent Behavioral Systems (3 crs.)

A study of behavioral systems in the commission of crime and delinquency. Such systems include institutional as well as more informal social structures and patterns of behaviors, including the normative rationalizations that support and legitimize criminal and delinquent behaviors in society. (*Prerequisite: SO 328*) *Spring semester*

SO 385 Victimology: Sociology of Victims (3 crs.)

This course is organized to address the significant questions of the victimologist perspective: who are victims in specific types of crimes, and how do they become victims? What role do victims play in their own victimization? Are there victimless crimes? How are victims treated by the police, the courts and related agencies? What can the criminal justice system do for the victims? Should victims participate in the sentencing process? Should victims be compensated and, if so, by whom? (*Prerequisites: SO 102 and SO 328*)

SO 399 Special Topics in Sociology (3 crs.)

Various special topics of current interest in sociology will be offered from time to time. Topics will be announced before registration. May be taken more than once but only three (3) credits will be counted toward the first 30 hours in the sociology major. (*Prerequisite: SO 102*) *Offered alternate years, fall semester*

SO 400 Seminar: Social Theory (3 crs.)

The history of social theory and selected topics in modern social theories, analysis of alternative conceptual approaches and their methodological requirements. For majors in sociology or behavioral sciences. (*Prerequisite: SO 102 and three additional sociology courses*) *Either semester*

SO 402 Seminar: Research Methods in Sociology (3 crs.)

Application of scientific methods to the analysis of social phenomena, methodological orientation in sociology, types of research procedures, nature of sociological variables. For majors in sociology or behavioral sciences. (*Prerequisite: SO 102 and three additional sociology courses*) *Either semester*

SO 403 Seminar: Social Data Analysis (3 crs.)

This course introduces students to computer-based, quantitative data analysis. The course focuses on the major statistical techniques used in sociology and anthropology and will emphasize data analysis in the context of substantive research problems. Topics covered include: microcomputer-based data analysis packages, choosing appropriate statistics, interpreting statistical results, and presenting research findings. (*Prerequisites: Either SO 102 and SO 402 or AN 100 and AN 103*) *Either semester*

*No more than six hours of any combination of SO 498 and SO 499 may be counted toward the first 30 hours of the sociology requirements for a major.

SO 498 Field Experience in Sociology* (3-15 crs.)

The field experience provides an academic experience in which the student contributes to the ongoing organizational process while learning to apply sociological theories to observations of structure, function and process in a particular institution. (*Prerequisite: consent of the department; formal application required*) *Either semester*

SO 499 Directed Study in Sociology* (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department; formal application required*) *Either semester*

Other Approved Courses:

SO 325 Sociology of Small Groups

SO 401 Contemporary Sociological Theory

SO 497 Research

SO 501 Graduate Seminar in Sociological Theory (3 crs.)

Designed to foster skills in theory construction and in analyzing several major sociological paradigms and schools of thought, including structural-functionalism, conflict theory, and symbolic interaction. Readings from classical and modern sociologists such as Durkheim, Marx, Spencer, Parsons, and Homans will be examined. (*Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor*)

SO 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

SO 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

SO 504 Graduate Seminar in Sociological Research Methodology (3 crs.)

Detailed discussion and use of techniques for the empirical study of social order including exploratory, descriptive, and causal research; observation (structured and unstructured), interviews and questionnaires; survey research and experimental design, content analysis, sampling, problems in measurement techniques and data analysis. (*Prerequisite: A minimum of three courses acceptable to the department or consent of the instructor*)

SO 506 Theories of Race and Ethnic Relations (3 crs.)

Focus on the use of racial and ethnic characteristics in the operation of inequality in society. Beginning with the general principles of intergroup relations (majority and minority concepts), material will be introduced to apply these ideas to specific experiences of racial and ethnic groups, especially Black Americans. (*Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor*)

SO 508 Social Stratification in Comparative Perspectives (3 crs.)

Theories of inequality between groups in historical perspective, from classical to modern industrial times. Discussion and evaluation of sociological research in social stratification in regard to different social and cultural groups. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor)*

SO 510 Urban Community Analysis (3 crs.)

The changing structure and dynamics of urban social organization in the context of modernization and urbanization. Emphasis upon cities and metropolitan areas in America. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor)*

SO 514 Theories of Social Deviance (3 crs.)

Descriptions and explanations of a variety of deviant behavior, beliefs, and attributes, including mental and physical deviance, deviant sexual practices, and religious cult movements. Reading, writing, and observation will be conducted in order to understand the social forces that contribute to the creation, maintenance, and change of deviant relationships involved in vice, sin, disloyalty, and crime. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor)*

SO 516 Sociology of Sex and Gender (3 crs.)

Ramifications of ascribed statuses "male" and "female" in contemporary and noncontemporary societies. Origins and effects of gender roles. Examination of myths explaining gender roles. Projections for the future. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor)*

SO 518 Sociology of Aging (3 crs.)

Sociological forces in the aging process and among the aged. Examination of the impact of physiological and psychological forces on the process. The major social institutions and their interactions with aging. Policy implications for the future. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor)*

SO 520 Sociological Analysis of Small Groups (3 crs.)

Description and analysis of the formation, structure, and nature of relationships observed in small and informal groups, including work groups, families, peer groups, cliques, religious sects, communes, and aristocracies. *(Prerequisite: consent of the instructor)*

SO 528 Seminar: Sociology of Education (3 crs.)

Sociological theories and research relevant to issues in education. Investigation of selected problems from a sociological perspective: socialization, selection and social stratification patterns; bureaucracy, professionalization, and authority relations in schools; prospect of social change resulting from school reform. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor)*

SO 530 Seminar in Society, Culture, and Personality (3 crs.)

Analysis of a variety of structures and processes that influence individuals and that relate them to their social milieu and cultural products. Attention will also be paid to the manner in which individuals both interact with and change social structures and cultural environments, such as technology, institutions, and ideologies. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor)*

SO 580 Special Topics in Social Research Techniques (3 crs.)

Designed to take advantage of the 1) availability of faculty with special expertise in certain issues and techniques of sociological research; 2) specific methodological interests and needs expressed by students; and 3) significant developments in the field of sociology and in society. One or more from a number of methods or methodological issues may be studied, including, but not restricted to the following: survey research, measurement, research design, data analysis, evaluation research, needs assessment, and ethnomethodology. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor)*

SO 585 Special Topics in Sociological Theory (3 crs.)

Designed to take advantage of the 1) availability of faculty with special expertise in certain issues and approaches in sociological theory; 2) specific theoretical interests and needs expressed by students, and 3) significant developments in the field of sociology and in society. One or more from a number of theoretical issues may be examined consistent with the foregoing. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the instructor)*

Department of Speech Communication, Theatre Arts, and Communication Disorders

Faculty

<i>Chairperson:</i>	Associate Professor Arthur Dirks
<i>Professors:</i>	Sandra Briggs, Lee Dunne, Susan Holton, Stephen Levine, Joel Litvin, Thomas Mickey, Nancy Street, Richard Warye
<i>Associate Professors:</i>	Susan Miskelly, Nancy Moses, Nancy Owens, Suzanne Ramczyk
<i>Assistant Professor:</i>	Michael Reano, Joanne Wuschke

Undergraduate Programs

Bachelor of Arts

Students majoring in this Department may choose one of three concentrations: Speech Communication, Theatre Arts, or Communication Disorders.

The Department of Speech Communication, Theatre Arts and Communication Disorders cooperates with several other departments in offering a number of minors for students wishing to explore studies which draw upon knowledge and expertise in more than one field. For detailed information on these programs, see the catalog section *Multidisciplinary and Pre-Professional Programs*, and consult the department. These programs include:

Dance
Public Relations
Radio and Television Operation and Production

Speech Communication Concentration

Students selecting this concentration pursue a course of applied and theoretical studies in foundational areas of the field. The minimum requirements include:

CC 210 Voice and Diction
CC 250 Public Speaking
CC 260 Group Communication and Decision Making
CC 270 Interpersonal Communication
CC 295 Foundations in Communication
CC 395 Rhetorical and Communicative Theory
CC 495 Seminar in Communication
plus 9 additional credits from among speech communication courses.

Speech Communication Minor

CC 130 Human Communication Skills
CC 210 Voice and Diction
plus twelve additional credits selected from communication courses.

Speech Communication, Theatre Arts, and Communication Disorders

Communication Disorders Concentration

The concentration in Communication Disorders is a pre-professional program providing the necessary course work to continue in speech pathology, audiology or related fields at the graduate level. Courses in the specialization can be credited toward American Speech and Hearing Association Certification.

The minimum requirements include:

CC 130 Human Communication Skills
CC 210 Voice and Diction
CD 220 Introduction to Communication Disorders
CD 281 Speech Anatomy and Physiology
CD 282 Speech and Hearing Science
CD 290 Language Acquisition and Development
CD 294 Phonetics
CD 312 Language Disorders in Children
CD 313 Articulation Disorders
CD 351 Introduction to Audiology
CD 352 Clinical Audiology
One elective chosen from
CD 325 Voice Disorders in Children and Adults
or
CD 393 Aural Rehabilitation

If state or national certification is sought, a student must consult with the department in planning a program.

Communication Disorders Minor

CC 130 Human Communication Skills
CC 210 Voice and Diction
CD 220 Introduction to Communication Disorders
CD 281 Speech Anatomy and Physiology
CD 290 Language Acquisition and Development
CD 294 Phonetics

Theatre Arts Concentration

Students selecting this concentration follow a program designed to develop skills in and appreciation of those subjects related to performance and production in live theatre. The minimum requirements include:

CT 115 Play Production
CT 211 Voice Production for Theatre
CT 220 Play Analysis for Production
CT 242 Acting I
CT 272 Stagecraft
CT 421 Theatre History I
CT 422 Theatre History II
CT 431 Directing I
CT 495 Seminar in Contemporary Theatre
One three-credit elective course in theatre
Four credits in
CT 140 Theatre Performance Practicum
CT 170 Technical Theatre Practicum
CT 185 Theatre Management Practicum
(2 credits must be in CT 170 or CT 185)

Theatre Arts Minor

CC 130 Human Communication Skills
CC 210 Voice and Diction
CT 115 Play Production
Two credits in:
CT 140 Theatre Performance Practicum
and/or
CT 170 Technical Theatre Practicum
Nine additional credits selected from theatre courses.

Minor in High School Education

Students minoring in education must refer to the Department of Secondary Education and Professional Programs for specific requirements.

Double Major with Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in Communication Arts and Sciences and Elementary Education, Early Childhood Education or Special Education for certification purposes. Appropriate advising materials with suggested course sequences are available.

School of Arts and Sciences

Co-Curricular Programs

The Department of Speech Communication, Theatre Arts, and Communication Disorders has an active children's theatre program which provides one production each spring for school age children. Four student clubs are actively engaged in co-curricular activities supportive of the academic programs in the department.

The Forensic Society participates in intercollegiate competition in debate, group discussion, and individual speech competition in over fifteen separate categories including persuasive, informative, humorous speaking and oral interpretation of literature. Membership is open to all students with or without previous experience.

The Communication Club is open to all students for information/interchange on the professions related to the field of communication studies.

The Bridgewater chapter of the National Student Speech and Hearing Association is open to all students in the college community with an interest in communication disorders. The group sponsors career counseling as well as professionally related workshops during the academic year.

The Ensemble Theatre, in cooperation with the theatre arts area of the department, produces two major theatrical productions a year, one of which usually is a musical. It also sponsors and produces student-directed studio productions, workshops, and social and educational activities, including theatre trips to Boston, Providence, and New York City.

The B.S.C. Dance Company is open to all who like to dance and participate in the performance of original works. It presents two public programs per year and brings a professional dance company to the campus for a brief residence program and recital.

Co-Curricular Credits

Students may also receive credits in the department for active participation in debate, forensics, choral, speaking, dance, or theatre--see course descriptions for:

CC 110 Forensics Practicum
CT 120 Choral Speaking Practicum
CT 140 Theatre Performance Practicum
CT/PE 155 Dance Practicum
CT 170 Technical Theatre Practicum
CT 185 Theatre Management Practicum

Note: A maximum of 6 credits in the above courses may be applied toward graduation.

Graduate Programs

Master of Arts in Communication Studies

The Department offers a program leading to the degree of Master of Arts in Communication Studies. Students develop a course of study with a concentration in either Speech Communication or Communication Disorders.

In addition to the Graduate School's admission requirements all applicants to the program must complete a successful interview with members of the departmental graduate committee prior to acceptance. The applicant's writing abilities will be evaluated using the candidate's statement on page 2 of the application to Graduate School. On the basis of these evaluations, candidates may be denied admissions or required to complete specific work designed to strengthen the candidate's perceived weakness.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described in the *Graduate School* section of this catalog. Degree requirements for both concentrations include six required credits (CC/CD 505 and CC/CD 506).

Communication Concentration

Program Coordinator: Dr. Nancy Street

Students selecting this graduate-level concentration pursue an advanced course of applied and theoretical studies in areas such as interpersonal relationships, small group communication, organizational communication, and public speaking. The

Speech Communication, Theatre Arts, and Communication Disorders

Communication concentration is designed primarily to prepare students for research, further graduate study, and professional development in such fields as administration, management, and human services. Ordinarily, students will complete a minimum of eighteen credits in departmental electives which are appropriate to the degree and have been approved by the student's adviser, and a six credit thesis program. A minimum of thirty approved graduate credits is required for graduation. Additional information regarding the M.A. degree is provided in the *Graduate School* section of this catalog.

An undergraduate major in one of the disciplines within the scope of the Liberal Arts and Sciences is normally required for admission to this concentration. However, those who have training in other areas may request an interview with the Department of Speech Communication, Theatre Arts, and Communication Disorders. For detailed information contact the department.

Communication Disorders Concentration *Program Coordinator: Dr. Sandra Briggs*

The graduate-level concentration in Communication Disorders is designed to meet the course work and practicum standards for certification by the American Speech-Language-Hearing Association. If a student completes all academic and clinical practica requirements prior to January 1, 1994, he will be eligible for ASHA certification. This program of study prepares the student for a professional career in speech/language pathology. For detailed information regarding ASHA certification standards, students should contact the department.

Prerequisites which must be taken prior to undertaking required graduate course work:

CD 281 Speech Anatomy and Physiology
CD 282 Speech and Hearing Science
CD 290 Language Acquisition and Development
CD 294 Phonetics
CD 312 Language Disorders in Children
CD 313 Introduction to Articulation Disorders
CD 351 Introduction to Audiology
EN 323 Introduction to Linguistics
PY 227 Development Through the Life Cycle

If a person applying to the program does not have a communication disorders background or has not taken the following courses for undergraduate credit, the following courses must be taken for either undergraduate or graduate credit prior to completion of

the degree program. However, if the student desires to obtain graduate credit, the student must obtain permission of the instructor within the first week of class and determine what additional requirements must be fulfilled to earn this credit. These courses are in addition to the required graduate program:

CD 325 Voice Disorders in Children and Adults
CD 390 Prepracticum
CD 393 Aural Rehabilitation
CD 451 Clinical Strategies

All accepted students must enroll in GP 501 Graduate Program Planning under the direction of their adviser. Credit requirements for this concentration (minimum of 44) include:

CC/CD 505 Communication Theories Overview
CC/CD 506 Communication Research Methods
CD 352 Clinical Audiology (if not taken before)
CD 543 Advanced Clinical Strategies
CD 552 Neurogenic Communication Disorders
CD 553 Language Disorders in Older Children
CD 554 Organic Disorders in Children
CD 557 Fluency Disorders: Theory and Therapy
CD 558 Aphasia in Adults
CD 590 Nonverbal and Augmentative Communication Systems
CD 593 Cleft Palate and Orofacial Anomalies
Choice of:
CD 440 Clinical Practicum: Audiology (minimum 1 credit)
CD 520 Pediatric Audiology
CD 540 Advanced Audiology
CD 596 Graduate Clinical Practicum: Speech Pathology (minimum 1 credit)
CD 597 Graduate Clinical Practicum: Speech Pathology (minimum 12 credits)

School of Arts and Sciences

Master of Arts in Teaching (Speech Communication and Theatre)

The department offers a program leading to the degree of Master of Arts in Teaching. This program is designed primarily to meet the varied needs of graduate students who are currently teaching communication and/or theatre. A diverse and appropriate program of study is ensured when the student works closely with the adviser in course selection. All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog.

Speech Communication and Theatre Arts courses may also be taken in the Master of Arts in Teaching and CAGS programs in Creative Arts. For more detailed information regarding these programs, contact the Graduate School.

The following two undergraduate level courses are prerequisites for the graduate course work offered by the department: CC 130 Human Communication Skills and CT 115 Play Production. Additional undergraduate prerequisites in other departments may be required.

The departmental offerings listed below include the following courses which may not be taken for graduate credit:

- CC courses below the 300 level
- CC 499 Directed Study in Communication
- CD courses below the 300 level
- CD 312 Language Disorders in Children
- CD 313 Articulation Disorders
- CD 351 Introduction to Audiology
- CD 490 Clinical Practicum: Speech Pathology
- CD 499 Directed Study in Communication Disorders
- CT courses below the 300 level
- CT 498 Internship in Theatre
- CT 499 Directed Study in Theatre



Speech Communication, Theatre Arts, and Communication Disorders

Course Offerings*

Speech Communication

‡CC 110 Forensics Practicum (1 cr.)

Credit is given for sixty or more hours of intercollegiate debate and competitive speaking at intercollegiate tournaments. Maximum of 3 credit hours to be used toward a major or minor in Speech Communication. *Either semester*

CC 130 Human Communication Skills (3 crs.)

This course is designed to foster competence and improve performance in all areas of communication. Through participative learning, the student will demonstrate those skills necessary to communicate effectively in interpersonal, group and public communication situations. Satisfies the GER in Speaking. *Either semester*

CC 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman Honors Colloquia in Speech Communication allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) CC 135 fall semester, CC 136 spring semester

CC 210 Voice and Diction (3 crs.)

Analysis of each student's habits of respiration, phonation, and articulation; exercises designed to correct poor habits. Physics and physiology of the vocal mechanism. Training in perception, differentiation, and production of the standard sounds of good American speech. *Either semester*

CC 220 Introduction to Mass Communication (3 crs.)

This course provides a review of the historical development of mass communication and the current status of the industry. It includes an examination of the daily operations of print communication and broadcast communication industries and a brief consideration of career opportunities.

CC 250 Public Speaking (3 crs.)

Study, evaluation and analysis of speech preparation with frequent practice of various speech types. Informative, persuasive, and special occasion topics emphasized. *Either semester*

CC 260 Group Communication and Decision Making (3 crs.)

Extends theoretical knowledge of small group behavior. Stress will be on implementation of theories in such areas as leadership, roles of group members, conflict management, reasoning, argument and problem solving. *Either semester*

CC 270 Interpersonal Communication (3 crs.)

The description and analysis of interpersonal interaction and human relationships as they occur in everyday settings. *Either semester*

CC 280 Developing Creativity (3 crs.)

The purpose of this course is to increase the degree to which students recognize and nurture their creative potential, especially in sensing and meeting problems and challenges in all aspects of their academic and personal lives. *Either semester*

CC 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquia in Speech Communication allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) CC 286 fall semester, CC 287 spring semester

CC 295 Foundations in Communications (3 crs.)

This course provides an introduction to the field of communication and communication research. The sub-disciplines of the communication field will be reviewed, and an understanding of research methods used in this discipline provided.

*See pages 75-76 for general information regarding course offerings.

‡Note: From the one-credit co-curricular activities, CC 110, CT 120, CT 140, CT 155, and CT 185, and from any and all co-curricular activities for which the college grants credit, a student may accumulate not more than one credit per semester (two per year) nor more than six per four-year degree program. **Exception:** All one credit co-curricular and Physical Education activity courses that are required for officially enrolled and graduating students in an approved major, concentration or minor may be counted towards graduation.

School of Arts and Sciences

CC 301 Managing Messages: Introduction to Public Relations (3 crs.)

This course provides the student with a knowledge of the history, goals, objectives and skills associated with public relations. It offers students an opportunity to utilize acquired communication skills in a specific career area as well as giving students the opportunity to acquire writing, reasoning, listening, speaking and other skills required in public relations work. Case study analysis and hands-on applications are primary teaching/learning methodologies. *(Prerequisite: CC 130) Either semester*

CC 302 Interpersonal Conflict Resolution (3 crs.)

This course introduces the theory, research and practice associated with interpersonal conflict resolution. Students seeking careers in public relations, sales, business, organizational development and advocacy will benefit from this analysis of communication processes. *Fall semester*

CC 305 Advanced Forensics Laboratory (3 crs.)

After advanced individual work in speech composition and delivery, the student will be required to prepare a variety of speech types for intercollegiate competition. *(Prerequisite: CC 110 and CC 250) Fall semester*

CC 315 Speech for Radio (3 crs.)

Study and practice of effective different types of radio messages including music, announcing, PSA's, commercials, newscasts and public affairs. Formerly CC 215. *(Prerequisite: CC 210)*

CC 316 Speech for Television (3 crs.)

Study and practice of effective speaking techniques used for broadcast and cable television messages including the performance requirements for newsreading, sports, weather, interviewing and reporting. Formerly CC 215. *(Prerequisite: CC 210 or consent of the instructor) Either semester*

CC 320 Mass Communication in Society (3 crs.)

This course reviews theory and research in the field of mass communication. Special attention will be paid to the evolution of the concept of the mass audience and current concerns about the effects of media content on individuals and society. *(Prerequisite: CC 220 or equivalent) Fall semester*

CC 325 Broadcast News Writing (3 crs.)

This course offers instruction in the writing of news and public affairs copy for radio and television. News gathering and writing assignments will be given weekly. *(Prerequisite: EN 280)*

CC 330 Business and Professional Communication (3 crs.)

Increases levels of competence in negotiating, interviewing, evaluating, leading and presentational skills. This course stresses abilities needed to attain cooperation and exert influence in corporate and public sector work environments. *Spring semester*

CC 338-339 Honors Tutorial (3 crs. each semester)

Special topics in speech communication. Open to All-College and Departmental Honors students. Three hourly meetings weekly. *(Prerequisite: consent of the department) CC 338 fall semester, CC 339 spring semester*

CC 343 Nonverbal Communication (3 crs.)

This course is designed to provide the student with theoretical knowledge and practical analytical application of the field of nonverbal communication and its importance in the field of communication. *(Prerequisite: CC 130, CC 250, CC 260)*

CC 360 Argumentation and Advocacy (3 crs.)

The theory and practice of argument in various fields, including debate, public address, and interpersonal communication will be explored.

CC 365 Introduction to Intercultural Communication (3 crs.)

Introduction to Intercultural Communication is a course designed to acquaint students with the factors which affect interpersonal relationships among people of differing cultural backgrounds. Foreign as well as native-born persons are encouraged to take the course. Course objectives are to enable students to become more sensitive to and tolerant of values and ideas expressed by others. *Spring semester*

CC 391 Public Relations Seminar (3 crs.)

This course is designed to provide students with the opportunity to integrate their communication skills through supervised application of these skills in a public relations setting. Using a 30 hour required field experience as a focal point, students will utilize research, organizational thinking, writing and speaking skills throughout the semester. *(Prerequisite: CC 301) Either semester*

CC 395 Rhetorical and Communicative Theory (3 crs.)

This course chronicles the development of human communication theory from the time of its inception as rhetorical theory in ancient Sicily, through current twentieth century theories and perspectives on rhetoric, persuasion, and communication. The practical and social consequences of applying these theories will receive special attention. Formerly CC 351 and CC 450. *(Prerequisite: CC 250 and CC 295) Either semester*

CC 399 Topical Studies (3 crs.)

Variable contemporary topics in communication. *Either semester*

CC 420 Mass Communication Rules and Regulations (3 crs.)

This course provides and examination of the rules and regulations that pertain to the mass communication industries. The course will review federal agencies such as the FCC and the FTC and applicable State and Federal laws. *(Prerequisite: CC 220 or the equivalent) Spring semester*

CC 426 Critical Perspectives on Mass Communication (3 crs.)

This course focuses on theories of mass communication used for critiquing the major forms of mass media around the world. The theories include: dramatism, semiotics, Marxist view, popular culture and rhetorical analysis. *(Prerequisites: CC 130 and CC 320)*

CC 452 Organizational Communication (3 crs.)

Analysis of communication problems in modern complex organizations, theory and practice. *(Prerequisite: CC 130, CC 395, CC 320 or consent of the instructor) Spring semester*

Speech Communication, Theatre Arts, and Communication Disorders

CC 462 Patterns of International Communication (3 crs.)

A study of communication systems throughout the world. Students will focus on media as it functions within a variety of political systems. (Prerequisites: CC 130, CC 395, CC 320 or consent of the instructor) Spring semester

CC 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in and honors thesis. With the consent of the Departmental Honors Committee and the thesis director this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Departmental Honors Committee. Either semester

CC 495 Seminar in Communication (3 crs.)

This seminar will pursue in depth certain themes and topics in the area of the communication arts and sciences. (Prerequisite: CC 295, CC 395) Either semester

CC 498 Internship in Communication (3-15 crs.)

A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation. (Prerequisite: consent of the department, formal application required) Either semester

CC 499 Directed Study in Communication (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: consent of the department, formal application required) Either semester

CC 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalog.

CC 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalog.

CC 504 Communication Skills Overview (3 crs.)

This course is designed to provide students an opportunity to review their basic communication skills at all major levels and, with the assistance of the instructor, to diagnose particular areas of strength and weakness to be reinforced or improved upon in subsequent graduate school courses. (Prerequisite: CC 130 or equivalent)

CC/CD 505 Communication Theories Overview (3 crs.)

This course is designed to provide students with information concerning current developments in communication theory and a basis for the generation of thesis research problems. Theoretical formulations of general semantics, rhetoric, interpersonal

communication, intercultural communication, group dynamics and persuasion will be included. (Prerequisite: CC 395 or equivalent)

CC/CD 506 Communication Research Methods Overview (3 crs.)

This course is designed to provide students with the tools necessary to create meaningful and competent thesis, research, and project plans. Quantitative and nonquantitative research are covered, as well as project creation. (Prerequisite: CC 495 or equivalent)

CC 507 Speech Communication Education: Teaching Human Communication Courses in the College and University (3 crs.)

This course provides and analysis of current objectives, problems, and methods of teaching communication at the college level. Selection and preparation of teaching materials will be discussed. Evaluation techniques will be introduced and critiqued. Methods of relating speech to other subject areas will be explored.

CC 508 Classical and Medieval Rhetoric (3 crs.)

The course examines the traditions of rhetorical theory of antiquity. Students will analyze the evolution of rhetorical theory from the Sophists through the Medieval Rhetoricians, comparing and contrasting their perceptions of rhetorical principles and practices. (Prerequisite: CC 395 or consent of the instructor)

CC 511 Laboratory in Interpersonal Communication (3 crs.)

This course provides and extensive examination, diagnosis, and treatment of interpersonal communicative behavior of the individual. Emphasis is on the development and enrichment of interpersonal communicative skills and on theoretical perspectives for analyzing the structure of interpersonal communication. Interpersonal communication structures to be studied include communication as a ritual, role, game, personal strategy and a striving for intimacy.

CC 512 Public Communication (3 crs.)

An introduction to the methods of rhetorical research and historical critical inquiry as applied to the study of movement, issues, and speeches.

CC 513 Laboratory in Small Group Communication (3 crs.)

Extensive and intensive experience in small group communication focusing on group participation and leadership. Emphasis will be placed on the transmission, analysis, and processing of messages, and on the roles and functions of group membership.

CC 514 Coaching and Directing Forensics (3 crs.)

A study of the philosophies, problems, and techniques associated with forensic activities; recent trends and practices in co-curricular programs; critical evaluation of related research.

CC 515 Male/Female Communication (3 crs.)

A study of the gender variable in communication in four areas: 1) intrapersonal communication-socialization and self concept; 2) interpersonal relations between the sexes; 3) communication in structured groups; and 4) public communication--male and female orators.

School of Arts and Sciences

CC 516 Seminar in Intercultural Communication (3 crs.)

Analysis and comparison of communicative styles in different cultures. Investigation of differences in messages, communicative forms, target persons, defensive styles, and interpersonal processes of establishing, developing, and terminating relationships.

CC 520 Group Leadership (3 crs.)

This course focuses on responsibilities, theories, and practices associated with group leadership.

CC 525 Seminar in Mass Communication (3 crs.)

Examination of the audience of mass communication in terms of the uses and gratifications theories. (*Prerequisite: CC 320 or equivalent*)

CC 530 Problems in Organization Communication: Diagnosis and Treatment (3 crs.)

Analysis and treatment of specific common problems and communication breakdown and information overload in organizational structures. (*Prerequisite: CC 452 or equivalent*)

CC 535 Seminar in Communication Theory (3 crs.)

This course explores major communicative theories in depth.

CC 540 Scholarship and Criticism in Communication Studies (3 crs.)

The study of current scholarship and criticism in communication and rhetoric. Students will do library research, prepare written work for criticism and critique the work of others. Presentations will be written and oral. Work will conclude with a scholarly research paper. (*Prerequisite: CC 505*)

Communication Disorders

CD 220 Introduction to Communication Disorders (3 crs.)

An introduction to speech, language and hearing disorders in children and adults. Disorders of functional, structural and neurological etiologies will be discussed. *Either semester*

CD 231 Sign Language I (3 crs.)

History and development of manual communication. Focus on American Sign Language and exact English through vocabulary development and beginning conversational skills. Formerly CD 242. *Fall semester*

CD 232 Sign Language II (3 crs.)

A more advanced course in sign language with an emphasis on conversational skills and interpretation. Formerly CD 243. (*Prerequisite: CD 231*) *Spring semester*

CD 281 Speech Anatomy and Physiology (3 crs.)

Introduction to the study of the anatomy and physiology of systems involved in speech, language, and hearing, and their relationships to disorders of communication. *Fall semester*

CD 282 Speech and Hearing Science (3 crs.)

An introductory course as it relates to normal aspects of speech, hearing, and language. Physiological elements of speech production, speech acoustics, auditory physiology and the psychophysics of sound reception. Formerly CD 330. (*Prerequisite: CD 281*) *Spring semester*

CD 290 Language Acquisition and Development (3 crs.)

Interrelationships among linguistic, neurophysiological, physical, intellectual, social, and cultural factors as they affect language acquisition in the child. Analysis of language development will be undertaken by students. Formerly CD 292. *Either semester*

CD 294 Phonetics (3 crs.)

Analysis and transcription of speech sound systems. Formerly CD 291. *Spring semester*

CD 312 Language Disorders in Children (3 crs.)

Etiology, diagnosis, evaluation and treatment of language-impaired children. Clinical case material will be discussed and analyzed. Both habilitative and rehabilitative procedures will be covered. Formerly CD 322. (*Prerequisite: CD 290, CD 294*) *Spring semester*

CD 313 Articulation Disorders (3 crs.)

Study of abnormal and normal phonological development using approaches such as distinctive feature theory, phonological process analysis, assessment and therapy procedures. Formerly CD 310. (*Prerequisite: CC 210, CD 220, CD 281, CD 294*) *Fall semester*

CD 325 Voice Disorders in Children and Adults (3 crs.)

An introduction to etiology, diagnosis, and remediation of voice disorders and associated pathological conditions. (*Prerequisite: CD 220, CD 281, CD 294*) *Spring semester*

Speech Communication, Theatre Arts, and Communication Disorders

CD 335 Communication Problems Among the Elderly (3 crs.)
A survey of communication problems found among the elderly population including neurologically based speech and language disorders, disorders related to cancer, and auditory problems. Intervention options will be discussed. *Offered alternate years.*

CD 338-339 Honors Tutorial (3 crs. each semester)
Special topics in Communication Disorders. Open to All-College and Departmental Honors students. Three hourly meetings weekly. (*Prerequisite: consent of the department*) CD 338 Fall semester, CD 339 Spring semester

CD 351 Introduction to Audiology (3 crs.)
Science of hearing; transmission and measurement of sound to the human ear, anatomy, physiology, and neurology of hearing mechanism. Related pathological conditions will be discussed. Formerly CD 340. (*Prerequisite: CD 282*) Fall semester

CD 352 Clinical Audiology (3 crs.)
Study of the measurement of hearing including basic tests as well as tests used for differential diagnosis of auditory disorders. Two lecture periods and one two-hour laboratory period weekly. Formerly CD 341. (*Prerequisite: CD 351*) Spring semester

CD 393 Aural Rehabilitation (3 crs.)
Habilitation and rehabilitation for the hard of hearing including assessment and therapy procedures related to auditory training, speech reading, language therapy, and hearing aid training. Educational management and counseling strategies will also be addressed. (*Prerequisite: CD 351 and CD 352*) Fall semester

CD 399 Topical Studies (3 crs.)
Variable contemporary topics in communication disorders. Spring semester

CD 440 Clinical Practicum: Audiology (1-3 crs.)
This course provides clinical experience in audiology. Clinical hours obtained can be credited toward A.S.H.A. hours. Activities will include hearing screening and diagnostic testing in various settings. The course may be repeated once. (*Prerequisite: CD 352, a cumulative GPA of 2.5 in Communication Disorders courses, and consent of the department*) Either semester

CD 455 Diagnosis and Evaluation of Communication Disorders (3 crs.)

Objective of the course is to give the pre-practicum student understanding and skills in assessment and diagnosis of speech and language disorders in children and adults. CD 455 and CD 457 are taken in the fall semester of the senior year by all students who elect the state certification track. These courses may be taken by other Communication Disorders students only with the consent of the instructor. Formerly CD 456. (*Prerequisite: All required courses in the major as well as the following courses for certification must be completed: CD 312, CD 313, CD 325, and consent of the instructor*) Fall semester

CD 457 Intervention Strategies in Communication Disorders (3 crs.)

Intervention strategies for children and adults having speech, language, voice, rhythm, hearing and associated problems that interfere with communication. CD 455 and CD 457 are taken in the fall semester of the senior year by all students who elect the state certification track. These courses may be taken by other Communication Disorders students only with the consent of the instructor. Formerly CD 495. (*Prerequisite: CD 312, CD 313, CD 325, and consent of the instructor*) Fall semester

CD 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the Departmental Honors Committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Departmental Honors Committee. *Either semester*

CD 490 Clinical Practicum: Speech Pathology (1-6 crs.)

This is a clinical experience in speech pathology. Clinical hours obtained can be credited towards A.S.H.A. hours. Activities will be determined by students' needs, experience and academic preparation. Initially the student will register for one credit to be taken concurrently with CD 455 and CD 457. May be repeated once. (*Prerequisites: 2.5 G.P.A. and consent of the department, CD 312, CD 313, CD 325*)

CD 499 Directed Study in Communication Disorders (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department; formal application required*) *Either semester*

CD 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

CD 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

CD/CC 505 Communication Theories Overview (3 crs.)

This course is designed to provide students with information concerning current developments in communication theory and a basis for the generation of thesis research problems. Theoretical formulations of general semantics, rhetoric, interpersonal communication, intercultural communication, group dynamics and persuasion will be included. (*Prerequisite: CC 395 or equivalent*)

School of Arts and Sciences

CD/CC 506 Communication Research Methods Overview (3 crs.)
This course is designed to provide students with the tools necessary to create meaningful and competent thesis, research, and project plans. Quantitative and nonquantitative research are covered, as well as project creation. (*Prerequisite: CC 495 or equivalent*)

CD 520 Pediatric Audiology (3 crs.)

Assessment and clinical management of children with hearing disorders. Etiological factors; problems of screening and differential diagnosis, conditioning and electrophysiological methods. (*Prerequisite: CD 351, CD 352, CD 393*)

CD 540 Advanced Audiology (3 crs.)

After reviewing the function of the normal and abnormal auditory system, emphasis will be placed on current audiological methods of assessing normal and abnormal hearing. Implications of various types of hearing loss on communication abilities will be discussed. (*Prerequisite: CD 352, or equivalent and consent of graduate adviser*)

CD 543 Advanced Clinical Strategies (3 crs.)

An advanced course covering intervention strategies and diagnostic procedures. Emphasis will be placed on multicultural considerations and approaches appropriate to clients of all ages. (*Prerequisite: CD 451*)

CD 552 Neurogenic Communication Disorders (3 crs.)

Consideration of neuropathologies, assessment and intervention for communicative disorders of neurogenic origin. Includes the dysarthrias, apraxia of speech, language of confusion and generalized intellectual impairment, and management of individuals with traumatic closed head injuries. Also includes treatment of dysphagia of neurogenic origin. (*Prerequisite: CD 281, CD 290, CD 312, CD 313*)

CD 553 Language Disorders in Older Children (3 crs.)

Emphasis concerns review of later stages of language acquisition, description and management of semantic, syntactic, and pragmatic language disorders in the older child. (*Prerequisites: CD 290, CD 312*)

CD 554 Organic Communication Disorders in Children (3 crs.)

This course will cover organic bases of communication disorders in children such as cleft palate and orofacial anomalies, and other contemporary problems. (*Prerequisites: CD 290, CD 312, CD 313, CD 325*)

CD 557 Fluency Disorders: Theory and Therapy (3 crs.)

A survey of stuttering theories and diagnostic/intervention techniques. (*Prerequisite: CD 220*)

CD 558 Aphasia in Adults (3 crs.)

Consideration of neuroanatomy, etiologies, characteristic language speech disorders, psychological correlates, classification systems, and diagnostic and rehabilitation procedures. (*Prerequisite: CD 220, CD 281, CD 282, CD 290, CD 312, CD 313, CD 325*)

CD 590 Nonverbal and Augmentative Communication Systems (3 crs.)

The course will address theoretical and pragmatic issues in client assessment, augmentative system selection and therapy procedures for implementation. A variety of nonverbal and augmentative communication systems will be reviewed including manual and computer assisted orthographic, word unit and compound systems. (*Prerequisite: CD 290, CD 313*)

CD 593 Cleft Palate and Orofacial Anomalies (3 crs.)

Embryology, etiology, diagnostic and intervention considerations in cleft lip and palate as well as associated orofacial anomalies. (*Prerequisite: CD 281, CD 313, CD 325 and consent of the instructor*)

CD 595 Advanced Assessment and Interpretation of Communication Disorders (3 crs.)

Advanced diagnostic procedures appropriate to neurophysiological, and psychologically-based disorders of communication. (*Prerequisite: CD 455, CD 490*)

CD 596 Graduate Clinical Practicum I: Speech Pathology (1-6 crs.)

Advanced practicum under the direction of college staff. May be repeated once. (*Prerequisite: consent of the instructor*)

CD 597 Graduate Clinical Practicum II: Speech Pathology (1-15 crs.)

Advanced practicum in clinical settings with a focus on communication disorders in children and adults. (*Prerequisite: CD 596 or consent of the instructor*)

CD 599 Topical Studies in Communication Disorders (3 crs.)

Variable topics, issues and contemporary research in speech pathology and audiology. (*Prerequisite: consent of the instructor*)

Speech Communication, Theatre Arts, and Communication Disorders

Theatre Arts

A student majoring in Theatre Arts will be required to complete 4 semester hours of practicum (CT 140, CT 170, CT 185) of which a minimum of 2 semester hours must be in CT 170 or CT 185.

CT 110 Theatre Appreciation (3 crs.)

This course introduces the student to the roles of theatre artists, the special nature of live theatrical performances, the art of theatre as an expression of human experience and to the richness and variety of the heritage of the theatre. Theatre attendance is required. This course is suitable for students from a variety of majors other than theatre seeking a basic knowledge of theatre. Satisfies the GER in Artistic Modes of Expression. *Either semester*

CT 115 Play Production (3 crs.)

This course introduces the student to the processes involved in the creation of theatre art. The student develops an understanding of the aesthetics and conventions of the theatrical event through observation and structured applied experience in the basic practices involved in planning and performing. Attendance at a theatre performance is assigned and additional laboratory time is required. Satisfies the GER in Artistic Modes of Expression. *Either semester*

‡CT 140 Theatre Performance Practicum (1 cr.)

Credit is given for sixty (60) or more hours per semester of rehearsal and performance time in a major production. Audition is required. *Either semester*

*CT/PE 146 Dance Appreciation (3 crs.)

This course is designed to explore the basic components of dance and to enable students to appreciate the art of dance as an informed audience and as participants in its rich variety. Satisfies the GER in Artistic Modes of Expression.

‡*CT/PE 155 Dance Practicum (1 cr.)

In this class students will choreograph and rehearse dances for a concert performance. Concurrent enrollment in a dance class is strongly advised. *Fall semester is open to all; spring semester is open by audition only.*

*CT/PE 156 Movement and Dance for Actors (3 crs.)

Exercises in developing and communicating a character through movement. Introduction to theatre movement, including jazz dance, tap and mime.

**Offered for credit for both the Speech Communication, Theatre Arts and Communication Disorders and the Movement Arts, Health Promotion and Leisure Studies Departments.*

‡ Note: From the one-credit co-curricular activities, CC 110, CT 120, CT 140, CT/PE 155, CT 170, and CT 185, and from any and all co-curricular activities for which the college grants credit, a student may accumulate not more than one credit per semester (two per year) nor more than six per four-year degree program. **EXCEPTION:** All one credit co-curricular and Physical Education activity courses that are required for officially enrolled and graduating students in an approved major, concentration or minor may be counted towards graduation.

CT 160 Stage Make-up (1 cr.)

Study and practice in the art of straight and character make-up for the stage. Meets twice weekly for two hours for one quarter. *Fall semester*

‡CT 170 Technical Theatre Practicum (1 cr.)

Credit is given for 60 or more hours per semester of technical work on a major production. Two of the required four practicum credit hours must be earned in CT 170 or CT 185. (*Prerequisite: consent of the instructor.*) *Either semester*

CT 175 Design Techniques for the Stage (3 crs.)

This studio course develops the skills and techniques of visual communication of design ideas and explores period styles and furnishings. The course focuses on basic drafting, sketching, and drawing, watercolor rendering, and period research. (Meets four hours weekly.) *Offered alternate years*

‡CT 185 Theatre Management Practicum (1 cr.)

Credit is given for 60 or more hours per semester of work in audience development, publicity, box office, and house management activity in connection with departmental productions. Two of the required four practicum credit hours must be earned in CT 170 or CT 185. (*Prerequisite: consent of the instructor*) *Either semester*

CT 210 Oral Interpretation (3 crs.)

Analysis and oral reading of prose, poetry and drama; individual and group forms, theory and practice. Satisfies the GER in Artistic Modes of Expression.

CT 211 Voice Production for Theatre (3 crs.)

This course provides an analysis of each student's vocal habits in performance. Exercises which concentrate on good vocal habits and techniques for the performing artist, training in physical perception of the sounds of "good American speech" and manipulation of the variables of speech for stage interpretation are included. An introduction to the vocal performance of Shakespeare is performed. *Spring semester*

CT 220 Play Analysis for Production (3 crs.)

The objective of the course is to train theatre artists in methods of play analysis for production which can be applied to diverse periods and styles. The works explored range through early Greek, Elizabethan, Restoration and Georgian, Neoclassicism, Realism, Expressionism, and Theatre of the Absurd. (*Prerequisite: CT 110 or CT 115*) *Fall semester*

CT 222 Asian Theatre (3 crs.)

This course introduces the theatre of several Oriental cultures and their aesthetic foundations in ritual and myth. Included are Sanskrit, Chinese, Japanese and other Asiatic traditions. Satisfies the GER in Non-Western Civilization. *Spring semester*

CT 226 Children's Theatre (3 crs.)

Theatre for the child audience: The study of styles and structures for children's theatre and analysis of representative theatre pieces for children. Opportunity for performing selected pieces. Satisfies the GER in Artistic Modes of Expression.

School of Arts and Sciences

CT 230 Creative Dramatics (3 crs.)

Development of the child's creative faculties through the use of dramatic play in laboratory sessions as well as classroom activity. *Offered alternate years*

CT 236 The American Musical Theatre (3 crs.)

Major trends in the evolution of the American Musical Theatre from its origin to the contemporary Broadway musical. Examination of major works of leading composers, librettists, performers, producers, and choreographers. Satisfies the GER in Artistic Modes of Expression.

CT 241 Improvisational Acting (3 crs.)

Development of the student's capabilities in interpreting his awareness of life through concentration, imagination, and observation.

CT 242 Acting I (3 crs.)

Development of appreciation and basic skills in the fundamentals of acting. Exercises, improvisations, and scenes. *(Prerequisite: CT 115) Spring semester*

CT 243 Acting II (3 crs.)

Advanced problems and projects; intensive scene analysis and introduction to styles of acting. *(Prerequisite: CT 115, CT 242 or consent of the instructor) Offered alternate years*

CT 247 Performing the Musical (3 crs.)

The course is a laboratory experience in the performance of musical theatre. The student studies the aspects of movement, singing, and acting as they are unique to musical theatre performance. Songs, dances, and scenes will be staged; directed and critiqued.

*CT/PE 251 Dance History (3 crs.)

Examination of dance as a social and artistic force from primitive to modern times. Class will include lecture and film as well as performance of dances in historical styles. Satisfies the GER in Artistic Modes of Expression.

*CT/PE 255 Creative Dance I (3 crs.)

This course investigates the theory of dance through participation, composition, lecture, discussion and film. Students learn about the elements of space, time, force, movement and style. Satisfies the GER in Artistic Modes of Expression. *Fall semester*

*CT/PE 256 Creative Dance II (3 crs.)

The use of basic elements of dance to form a set movement composition. Exercises in choreography and experiences in setting a dance for performance. *(Prerequisite: CT/PE 255) Spring semester*

*CT/PE 259 Dance Repertory (1 cr.)

Students are taught a major choreographic work and rehearse it for performance. *Spring semester*

**Offered for credit for both the Speech Communication, Theatre Arts and Communication Disorders and the Movement Arts, Health Promotion and Leisure Studies Department.*

CT 265 Stage Costuming (3 crs.)

This course covers principles and techniques of costuming for the stage, including design and construction of costumes and organization of costuming for theatrical production. Additional laboratory time is required. *Offered alternate years*

CT 272 Stagecraft (3 crs.)

Theory and production of technical theatre with emphasis on planning the production. Study and practice in stage management, set construction, and properties. Additional laboratory time is required. *(Prerequisite: CT 115) Spring semester*

CT 278 Scene Design (3 crs.)

Theory and practice of designing for stage productions. *(Prerequisite: CT 115)*

CT 280 Theatre Management (3 crs.)

Study of the commercial aspects of theatrical production: publicity, programs, financing, ticket sales and house management. *(Prerequisite: CT 115)*

CT 282 Community Theatre (3 crs.)

Trends, organization, and practices of local and regional theatrical groups.

CT 338-339 Honors Tutorial (3 crs. each semester)

Special topics in Theatre Arts. Open to All-College and Departmental Honors students. Three hourly meetings weekly. *(Prerequisite: consent of the department) CT 338 fall semester, CT 339 spring semester.*

CT 343 Acting for the Camera (3 crs.)

This course develops specialized techniques necessary for performance as an actor for film or television. *(Prerequisite: CC 210 or CT 211; CC 316 recommended)*

CT 346 Voice & Dialect for the Stage (3 crs.)

This course explores and provides practice in vocal training techniques; development of student's skills in analyzing and duplicating various production styles, as well as foreign dialects for performance. *(Prerequisite: CT 115, CT 242; CT 211 or CC 210)*

CT 347 Laboratory Theatre Production (3 crs.)

Analysis and practice in selection of playscripts, acting and directing techniques in rehearsal, culminating in the performance of a production. Entrance to the course is by audition or interview. Junior or senior standing is required. May be taken twice for credit. *Fall semester*

CT 349 Comedy on Stage (3 crs.)

Analysis and practice of theatrical comedy, including techniques appropriate to the interpretation and presentation of humorous dramatic scenes in the classroom. *(Prerequisite: CT 115, CT 242 or consent of the instructor) Offered alternate years*

CT 353 Creative Dance for Children (3 crs.)

The study and experience of dance as a creative art activity for children. For those planning to work with children in schools, camps, community centers, or enrichment programs. *(Prerequisite: One three credit dance course or consent of the instructor)*

Speech Communication, Theatre Arts, and Communication Disorders

*CT/PE 357 Dance Production Theory (2 crs.)

This course provides the opportunity to choreograph and plan the presentation of a major dance work. Lectures and practical assignments in choreography and stagecraft for dance result in a plan for a dance piece. (Prerequisite: CT/PE 255 and CT/PE 256, or consent of the instructor) Fall semester

*CT/PE 358 Dance Production Techniques (1 cr.)

Provides students the opportunity to set a choreographed work for dancers and rehearse for presentation. Spring semester

CT 372 Advanced Stagecraft (3 crs.)

This course presents advanced principles and techniques of employing specialized materials and processes in preparing scenery and properties for the stage. A laboratory is required. (Prerequisite: CT 115, CT 272) Offered alternate years

CT 376 Stage Lighting (3 crs.)

Materials and techniques fundamental to contemporary stage lighting; analysis of the principles of design as they relate to contemporary theatre production. Offered alternate years

CT 399 Topical Studies (3 crs.)

Variable contemporary topics in theatre. Either semester

CT 421 Theatre History I (3 crs.)

Trends in dramatic and theatrical developments throughout the western world from Ancient Greece to the 17th century. Not open to freshmen. Fall semester

CT 422 Theatre History II (3 crs.)

Trends in dramatic and theatrical developments throughout the western world from the 17th century to the present. Not open to freshmen. Spring semester

CT 430 Playwriting (3 crs.)

Appreciation of the nature of the play as an art form. Analysis of plays of various types. Practice in writing.

CT 431 Directing I (3 crs.)

Basic knowledge and techniques for the beginning director. Play analysis, composition, movement, characterization and rehearsal. Formerly CT 332. (Prerequisite: CT 115, CT 242 or consent of the instructor) Spring semester

CT 432 Directing II (3 crs.)

This course considers the principles of direction and various theories of direction with practical experience in directing scenes for the stage. (Prerequisites: CT 115, CT 242, CT 431)

CT 442 Acting Styles (3 crs.)

Analysis and practice of styles of acting and staging methods of selected historical periods and modern movements considered classics in the development of theatre, including the Greek, Elizabethan, Restoration, Georgian, and neoclassic periods and

schools, and the works of such as Ionesco, Brecht, Beckett, and Moliere. Improvisations, scenes, monologues. (Prerequisite: CT 115, CT/PE 156, CT 242, CT 243, CC 210 or CT 211)

CT 455 Audition Techniques (3 crs.)

This course explores and practices audition theory and techniques. Audition pieces of various styles and periods are developed and critiqued. Different formats for auditions are utilized. (Prerequisites: CT 211, CT 115, CT/PE 156, CT 242, and CT 243)

CT 485 Honors Thesis (3 crs.)

This course is open to All-College and Departmental Honors students. One-hour weekly meetings with the thesis director will culminate in an honors thesis. With the consent of the Departmental Honors Committee and the thesis director, this course may be extended into a second semester for three additional credits depending upon the scope of the project. Whether the final version of the thesis qualifies the student to graduate with honors will be determined by the Departmental Honors Committee. Either semester

CT 495 Seminar in Contemporary Theatre (3 crs.)

This is a required capstone course for students graduating with a concentration in theatre. The course deals with issues in contemporary theatre and practical matters surrounding careers in theatre. Recital, portfolio, or thesis is required. (Prerequisite: senior standing, theatre concentration) Fall semester

CT 497 Advanced Individual Projects (1-3 crs.)

The student contracts with faculty to explore learning activities of a creative nature beyond the scope of regular course offerings. (Prerequisites: junior standing; consent of faculty supervisor; course prerequisites depend on project)

CT 498 Internship in Theatre (3-15 crs.)

A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation. (Prerequisite: consent of the department; formal application required) Either semester

CT 499 Directed Study in Theatre (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: consent of the department; formal application required) Either semester

Other Approved Courses:

CT 120 Choral Speaking Practicum

CT 351 Movement in the Creative Arts

CT 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalog.

CT 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalog.

*Offered for credit for both the Speech Communication, Theatre Arts and Communication Disorders and the Movement Arts, Health Promotion and Leisure Studies Departments.

School of Education

Elementary and Early Childhood Education
Movement Arts, Health Promotion, and Leisure Studies
Secondary Education and Professional Programs
Special Education
Counseling
Educational Leadership and Administration
Instructional Media/Library Science
Burnell Campus Laboratory School
CAGS in Education
School of Education Offices
Office of Certification
Office of Student Teaching

Dean, School of Education
Dr. Ann Lydecker

Academic Departments

Elementary and Early Childhood Education
Professor Judith Deckers, Chairperson

Secondary Education and Professional Programs
Professor W. David Englund, Chairperson

Movement Arts, Health Promotion, and Leisure Studies
Dr. Mary Lou Thornburg, Chairperson

Special Education
Dr. Tracy Baldrate, Chairperson

Academic Programs

Counseling
Dr. Maxine Rawlins, Coordinator

Early Childhood Education
Dr. John Marvelle, Coordinator

Educational Leadership and Administration
Dr. Joanne Newcombe, Coordinator

Elementary Education
Dr. Wayne Phillips, Coordinator

Secondary Education and Professional Programs
Professor W. David Englund, Coordinator

Instructional Media/Library Science
Professor Richard Neubauer, Coordinator

Movement Arts, Health Promotion, and Leisure Studies
Dr. Mary Lou Thornburg, Coordinator

Reading
Dr. Ruth Farrar, Coordinator

Special Education
Dr. Tracy Baldrate, Coordinator

The School of Education offers undergraduate and graduate programs for the professional preparation of early childhood, elementary, middle and high school teachers, as well as for specialized positions in school and community-based organizations and agencies. The school also provides service to the schools, community organizations, and agencies of the region. The school conducts an on-going review of professional standards and requirements in order to respond to the changing needs of the profession. Graduates of programs leading to provisional certification are ready to enter the profession. During advanced degree programs leading to full certification and other graduate coursework, professional educators strengthen their leadership abilities and their commitment to lifelong learning.

The Burnell Campus School provides education majors and students throughout the college with practical experiences which complement the theoretical background available in more formal study. Extensive field experiences in schools and agencies off campus further contribute to the development of meaningful linkages between study and practice. Procedures and guidelines are implemented to ensure that high quality standards are maintained in field-based experiences and that students have experiences working in settings with diverse populations of children and youth.

Students following the curricula leading to a Bachelor of Science in Education degree are prepared as Pre-School, Elementary School, Special Needs or Physical Education Teachers. Students majoring in Early Childhood, Elementary Education, or Special Education must complete a major in the School of Arts and Sciences, as well as in the School of Education. Students majoring in most curricula leading to a Bachelor of Arts or a Bachelor of Science degree may select a minor in High School Education which, prepares them for High School Teaching.

Undergraduate curricula offering degree and/or minor programs are:

Majors in:

- Early Childhood Education
- Elementary Education
- Physical Education (one may concentrate in):
 - Athletic Training
 - Coaching
 - Exercise Science/Health Fitness
 - Motor Development and Therapy/Adapted Physical Education
 - Recreation
 - Special Education

Minors in:

- Coaching
- Dance
- Exercise Physiology
- Health Promotion
- Health Resources Management
- Instructional Media
- Recreation

High School Education with majors in:

Art	English
Biology	French
Chemistry	History
Communication Arts & Sciences	Mathematics
Earth Sciences	Physics
Special Education	Spanish

Graduate curricula leading to the master's degree and Certificate of Advanced Graduate Study (CAGS) are offered in the following fields:

Master's Programs

Consult Office of:

Master of Arts
in Teaching

Secondary Education
and Professional Programs
(in conjunction with several
of the departments in the
School of Arts and Sciences.)

Master of Education in:

Early Childhood
Education
Elementary Education
Education
Reading

Health Science

Special Education
Counseling

Instructional Media

School Administration

School Librarianship

Elementary and Early
Childhood Education
Elementary and Early
Childhood Education
Elementary and Early
Childhood Education
Movement Arts, Health
Promotion and Leisure
Studies
Special Education
Secondary Education
and Professional Programs
Secondary Education
and Professional Programs
Secondary Education
and Professional Programs
Secondary Education
and Professional Programs

Bridgewater State College

Master of Science in:

Physical Education Movement Arts, Health
Promotion and Leisure
Studies

Post-Master's Programs:

Certificate of Advanced Graduate Study (CAGS) in Education For information about this program see the CAGS in Education description in this section of this catalog

The School of Education, through its departments and committees, offers the following state approved programs leading to Massachusetts certification and interstate certification reciprocity with approximately thirty-two other states, the District of Columbia, and overseas dependent schools. Information on undergraduate and graduate programs leading to certification is found in appropriate departmental sections.

- * Early Childhood Teacher (N-3)
- * Elementary School Teacher (1-6)
- * Teacher of Visual Art (N-9)
- * Teacher of Visual Art (5-12)
- * Teacher of Biology (9-12)
- * Teacher of Chemistry (9-12)
- * Teacher of Communication and Performing Arts (all levels)
- * Teacher of Earth Science (9-12)
- * Teacher of English (9-12)
- * Teacher of French (5-12)
- * Teacher of Geography (9-12)
- * Teacher of Health (K-9)
- * Teacher of Health (5-12)
- * Teacher of History (9-12)
- * Teacher of Mathematics (9-12)
- * Teacher of Physical Education (K-9)
- * Teacher of Physical Education (5-12)
- * Teacher of Physics (9-12)
- * Teacher of Social Studies (9-12)
- * Teacher of Spanish (5-12)
- Consulting Teacher of Reading (All Levels)
- * Teacher of Students with Special Needs (N-9)
- Library Media Specialist (N-12)
- School Guidance Counselor (N-9)
- School Guidance Counselor (5-12)
- Administrator of Special Education (All Levels)
- Director of Guidance (All Levels)
- Director of Pupil Personnel Services (All Levels)
- School Principal/Assistant School Principal (N-6)
- School Principal/Assistant School Principal (5-9)
- School Principal/Assistant School Principal (9-12)

Supervisor/Director (Various Levels)
Superintendent/Assistant Superintendent

CHANGES IN PROFESSIONAL CERTIFICATION

Students who wish to be elementary, early childhood or special education teachers are required to select a major in elementary, early childhood or special education and a major in the liberal arts or sciences. All teachers certified by the Commonwealth of Massachusetts after October 1, 1994 are required to have a major in the liberal arts or sciences.

Students should consult with both their Arts and Sciences adviser and their Education adviser each semester (with a final check the semester prior to their last semester) to insure that all certification and academic degree requirements have been successfully met.

It is the student's responsibility to insure that all required coursework is successfully completed for general education, the liberal arts and sciences major and the state approved major or minor which leads to certification. Students must additionally assume responsibility for submitting all materials to appropriate offices by the established deadlines.

Students having questions regarding their certification and/or academic requirements should consult with their adviser, the appropriate department chairperson, or the graduate program coordinator for additional information.

Admission to and Retention in Professional Education Programs - Undergraduate Education

All undergraduate and graduate students preparing for a career in education which requires certification must formally apply, satisfy all selection criteria, and be recommended by their department for admission into Professional Education Programs in the School of Education. Students may not enroll in education courses beyond the introductory level until they have met all admissions criteria and are officially admitted to the program.

Criteria for Admission and Retention

The following criteria have been established as minimum requirements for admission to and retention in an undergraduate Teacher Education Program.

1. The undergraduate applicant must be a matriculated student at the college with a minimum Bridgewater State College GPA of 2.5.
2. The applicant must file with his or her adviser in the School of Education, proof of proficiency in written English, as evidenced by passing grades for Writing I and II (EN 101 and 102), or an equivalent score on a "challenge" or CLEP examination.
3. All students are required to complete a minimum of forty contact hours (20 hours for secondary education minors) working with children or youth in schools or other agencies as part of an introduction to education course (ED 220, ED 221, EE 220, EE 230, or as prescribed by the Department of Movement Arts, Health Promotion and Leisure Studies). Prior approval of the field experience and certification of satisfactory completion is provided by the instructor.
4. All applicants for admission are required to submit a medical form completed and signed by an appropriate physician. The exam must include records for two measles immunizations after 12 months of age, mumps, rubella, tetanus/diphtheria and a mantoux tuberculin test (tine test is not acceptable) or chest X-ray. The applicant must submit the results to the Health Services office. Please note that tetanus diphtheria immunizations are valid for ten years. Tuberculin tests are valid for three years. It is the responsibility of the student to update (if necessary) these tests prior to the application deadline for student teaching to insure that the immunizations are valid through the last day of this experience.
5. Students must remain in full compliance with all regulations, requirements, policies, and procedures of the School of Education, the college, and the State Department of Education.

Admission Deadlines

The deadline for submitting completed application packets for admission into Professional Education Programs are as follows:

1. December 10 of the sophomore year for students completing the introductory course during the fall semester. Students in the Department of Movement Arts, Health Promotion, and Leisure Studies should consult with their department chairperson for the deadline.
2. April 25 of the sophomore year for students completing the introductory course during the spring semester. Students in the Department of Movement Arts, Health Promotion, and Leisure Studies should consult with their department chairperson for the deadline.
3. Transfer students should consult their academic adviser to determine the appropriate semester for application.

Students are responsible for maintaining communication with their academic advisers and preparing and submitting the completed application packet by the appropriate deadline. Students enrolling in upper division courses in the School of Education must have been officially accepted into Professional Education.

Admission Process

The following is the established process for admission to an undergraduate certification program in the School of Education.

1. The student receives the application packet from the instructor of the introduction to education course (ED 220, ED 221, EE 220, EE 230 or as prescribed by the Department of Movement Arts, Health Promotion, and Leisure Studies).
2. The student submits the completed application packet and supporting documentation to his or her departmental adviser in the School of Education or as otherwise specified by the department. The adviser reviews and recommends the student for admission to the department if the criteria are met.

Bridgewater State College

3. The department chairperson reviews and, if appropriate, recommends the applicant for admission to the School of Education.
4. The application packet is submitted to the School of Education office by the appropriate deadline; where if all requirements are met, the student will be officially admitted to the Professional Education Program.

Departmental Application for Practicum - Undergraduate Education

Admissions Criteria

The following criteria must be met for admission to the practicum:

1. The applicant must be a matriculated student at the college and must have been formally admitted into a Professional Education Program.
2. The applicant must have maintained a minimum Bridgewater State College GPA of 2.5.
3. The student must have proof of having had a tuberculin test which will be valid throughout the field experience.

Application Process

The following process is established for completing the undergraduate application for the practicum.

1. The student obtains the application from the Field Experience Office or his or her academic adviser.
2. The student completes the application form in consultation with his departmental adviser. The adviser recommends the applicant for the practicum if the criteria are met.
3. The department chairperson reviews and makes a recommendation regarding the applicant's request for the practicum.
4. The application packet is submitted to the Field Experience Office by the appropriate deadline.

Admission Deadline

1. The deadline for submitting the completed application packet to the Field Experience Office is

February 1, for placement during the following academic year.

All practica are completed within the college's service area at centers and sites established by the School of Education. Students are supervised by appropriately qualified faculty. In that the practica experiences are intense and rigorous, it is recommended that students not enroll in other courses during the semester that they student teach.

Written complaints filed by schools or agencies relative to a student teacher will be reviewed by a committee from the School of Education. In instances where the student teacher has not met the procedures, policies, standards and/or expectations of the college as set forth in this catalog, the Practicum Handbook and/or other college documents, the student will be removed from the assignment and the program.

Admission to and Retention in the Professional Education Programs - Graduate Education

The following requirements and criteria for admission to and retention in certification and degree programs in the School of Education have been established.

1. All students must complete and file a formal application.
2. All applicants for admission are required to submit a medical form completed and signed by an appropriate physician. The exam must include records for two measles immunizations after 12 months of age, mumps, rubella, tetanus/diphtheria, and a mantoux tuberculin test (tine test is not acceptable) or chest X-ray. The applicant must submit the results to the Health Services office. Please note that tetanus diphtheria immunizations are valid for ten years. Tuberculin tests are valid for three years. It is the responsibility of the student to update (if necessary) these tests prior to the application deadline for student teaching to insure that the immunizations are valid through the last day of this experience.

Additional criteria may be specified by a particular education program to which admission is sought. This information may be obtained from the appropriate departmental office.

The application for admission is completed at the same time as the application for admission to the Graduate School.

Departmental Application for Practicum - Graduate Education

Admissions Criteria

The following criteria must be met for admission to the practicum:

1. The applicant must be a matriculated graduate student at the college and must have been formally admitted into a Professional Education Program.
2. The applicant must have a minimum Bridgewater State College GPA of 3.0.
3. Students must have proof of having had a tuberculin test which will be valid throughout the field experience.

Application Process

The following is the established process for completing the graduate application for the practicum.

1. The student obtains the application from his education graduate adviser.
2. The student completes the application form in consultation with his adviser. The adviser recommends the applicant for the practicum if the criteria are met.
3. The graduate coordinator reviews and, if appropriate, recommends the applicant for the practicum through his graduate program.
4. The application packet is submitted to the Field Experience Office by the appropriate deadline; where, if all requirements are met, the student will be officially approved for the practicum experience.

Admission Deadline

The deadline for submitting a completed application packet is **February 1** if seeking placement for the following fall semester and **September 30** for the following spring semester.

All practica are completed within the college's service area at centers and sites established by the School of Education. Students are supervised by appropriately qualified faculty.

Verification of Completion of the Graduate School Certification Requirements for Institutional Endorsement -- Undergraduate and Graduate Education

The following is the established process for verifying completion of the departmental state program.

1. The student receives the verification packet from the academic adviser.
2. The student submits the completed application to his or her academic adviser within the established deadline. The adviser reviews and verifies that the student has successfully completed the departmental state approved program.
3. The department chairperson or graduate coordinator reviews and, if appropriate, confirms that the applicant has successfully completed the departmental state approved program.
4. The completed application is submitted to the School of Education Office where the dean of the School of Education confirms that the applicant has successfully completed the state approved program prior to recommending the student for certification.

Waivers for Certification

Undergraduate and graduate students with prior courses and/or experiences which are equivalent to or exceed those required in a particular state approved program (Certification Standards I-V) may request a waiver by way of their academic adviser through their department. Students should contact their adviser for a copy of this institutional process.

Professional Education Review Process

A student who experiences a problem pertaining to program waiver, certification or other matters may request consideration under the School of Education's established review process.

The first step is for the student to submit a written appeal to his adviser. If the situation cannot be resolved at this level the student and/or adviser will then proceed to the department chairperson or graduate coordinator. Should the student's situation not be resolved, then the student may petition the dean of the School of Education for review. The dean at his discretion, may convene a review board to hear the appeal.

Certificate of Advanced Graduate Study (CAGS) In Education

The School of Education offers a program leading to a Certificate of Advanced Graduate Study (CAGS) in Education, which is designed to meet the varied career needs of professionals who have earned an appropriate master's degree. The primary objectives of this program are to increase the individual's competence in designated areas of study and, by broadening the person's background, to develop increased leadership ability for addressing significant educational/societal issues.

Applicants must demonstrate that they possess an academic and experiential background relevant to their field, and must indicate their needs and goals are in accordance with the objectives of the CAGS. In addition to submitting CAGS application material to the Graduate School, students must enroll prior to program acceptance in ED 570 CAGS or SA 510 Seminar on Educational Leadership for the Future. The objectives of both courses include a professional assessment of the applicant on a personalized basis; in addition, to provide the student with a broad conceptualization of the field, as well as to focus the student's course of study on critical issues facing professionals in the field today; and to initiate individual program planning.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. CAGS credit requirements must be fulfilled by approved courses which clearly meet the student's academic and career needs. After completing

required CAGS coursework, the student must enroll in ED 581 CAGS Extern Program. The objective of this course is to help the student in a supportive environment enter into new leadership responsibilities making use of the knowledge and skills acquired in their CAGS program of study.

Additional information about the CAGS in education, including application procedures and academic requirements, may be found in the *Graduate School* section of this catalog and by contacting the Graduate School.

Course Offerings*

ED 555 Introduction to Statistics and Computer Analysis I (3 crs.)

Elementary descriptive statistics, control of the computer terminal, inferential statistics, and some programming concepts with a computer language for unique solutions of problems. (*Prerequisite: GC 500 or its equivalent*)

ED 570 CAGS Seminar (3 crs.)

Designed to provide for individual self-appraisal, institutional assessment, and professional development planning. Provides a broad conceptualization of the field of education and education today; focuses on faculty and course resources and the design of the applicant's proposed CAGS program, as influenced by the student's self-assessment and potential leadership responsibilities.

ED 581 CAGS Extern Program (3 crs.)

A blend of on-the-job training with a seminar approach to leadership and problem solving that is largely self-directed, evolves from the problems of the individuals comprising the group, is informal, provides long uninterrupted periods for discussions and interaction of problem statements and of ideas shared in formal presentations.

ED 590 Education Core: The Curriculum Experience (3 crs.)

Part of a five phased core program including research, societal issues, learning theories, clinical experience and curriculum development. This course addresses the principles of curriculum design. Students will develop and modify a curriculum in their own disciplines. As a final experience, the students will defend the curriculum as a part of a team, utilizing the experience of the entire five phased core program.

**See pages 75-76 for general information regarding course offerings.*

ED 591 Education Core: Human Development, Learning Theories, and Developmentally Appropriate Teaching Practices (3 crs.)

Part of a five phased core program including research, societal issues, curriculum design, clinical experience and learning theories. This course will focus on the stages, characteristics and individual differences in human development in the areas of sensory, motor, social, emotional, moral, and cognitive including language acquisition. The goal of this course is to explore and analyze theories on learning (including learning styles) and research in human development to determine developmentally appropriate teaching practices. *(Prerequisite: One undergraduate psychology course)*

ED 592 Education Core: Critical Issues-Educators and Society (3 crs.)

Part of a five phased core program including research, curriculum development, learning theories, clinical experiences and societal issues. This course addresses the critical issues of educators and society. This study of the critical issues of educators and society intends to clearly demonstrate the vital relationship between educational theory and practice when applied to the core related areas of curriculum, human development, and research.

ED 593 Education Core: Research and Evaluation (3 crs.)

Part of a five phased core program including societal issues, learning theories, curriculum development, clinical experience and research. This course is designed to serve as a foundation for conducting and evaluating research in education and related disciplines. It will stress the development of skills required for the critical evaluation of current research studies. Library resources useful in selecting and delimiting problems, appraisal of related literature, and documentation, organization, and format of a research study will be reviewed. The course will culminate in a comprehensive evaluation of a current research study. *(Prerequisite: One undergraduate course in basic statistics or equivalent)*

ED 594 Education Core: Clinical Experience - Part I (3 crs.)

Part of a five phased core program including research, societal issues, learning theories, curriculum development and a clinical experience. This course addresses the clinical experience. Students will practice four observation tools by observing children in a classroom. Students will modify classroom behavior based on the data obtained through observations. Students will demonstrate techniques of effective teaching through microteaching.



Department of Elementary and Early Childhood Education

Faculty

<i>Chairperson:</i>	Associate Professor Judith Deckers
<i>Professors:</i>	Wayne Dickinson, Diana Draheim, Ray Harper, Margery Kranyik, Wayne Phillips
<i>Associate Professor:</i>	Gerald Thornell
<i>Assistant Professors:</i>	Barbara Bautz, Ruth Farrar, John Jones, Margaret Joyce, John Marvelle, Maureen Moir, C. Thomas Wolpert

Undergraduate Programs

Elementary Education (1-6)

Bachelor of Science in Education

Students who wish to be elementary teachers, are required to select a major in elementary education and a major in the liberal arts or sciences. Under new state certification requirements, all teachers certified after October 1, 1994, are required to have a major in liberal arts or sciences.

Students completing their program before August of 1994 should consult pages 123 and 124 of the 1992-1993 *College Catalog*.

Students must apply for admission and be accepted into Professional Education after completion of EE 220 Principles of Teaching, and before the junior professional semester. EE 220 is the only education course in which students can enroll prior to official acceptance into a Professional Education Program.

Before entering professional courses in Reading, Language Arts, Mathematics, Science and Social Studies, and Educational Evaluation, a student must have a cumulative average of 2.5.

Students must complete 80 hours of prepractica experience. A forty hour experience is attached to the course EE 220. An additional 40 hours is attached to the professional courses; Reading, Language Arts, Mathematics, Science and Social Studies and Educational Evaluation. Undergraduates who are not taking these five courses together in a professional block must meet with their department chairperson to plan appropriate prepractica experiences.

Students successfully completing the program are eligible to apply for Massachusetts certification in Elementary Education (1-6).

Elementary and Early Childhood Education

All undergraduate students seeking professional certification must consult the section of this catalog entitled *School of Education* for information pertaining to the *State Regulations for the Certification of Educational Personnel* and important institutional deadlines.

The following courses are required to complete the Elementary Education major:

- EE 220 Principles of Teaching
- EE 300 Elementary Art Methods (.5 crs.)
- EE 310 Teaching Science and Social Studies in the Elementary School
- EE 312 Educational Evaluation
- EE 330 Teaching Reading in the Elementary School
- EE 340 Teaching Language Arts in the Elementary School
- EE 350 Teaching Mathematics in the Elementary School
- EE 492 Supervised Teaching in Public Schools

Early Childhood Education (N-3)

Students who wish to be early childhood teachers, are required to select a major in early childhood education as well as a major in the liberal arts or sciences. Under new state certification requirements, all teachers certified by the Commonwealth of Massachusetts after October 1, 1994, are required to have a major in the liberal arts or sciences. (Students completing their program before August of 1994 should consult pages 124 and 125 of the 1992-93 *College Catalog*.)

The Department of Elementary and Early Childhood Education offers a major in early childhood education which enables the student to prepare for career opportunities with young children from infancy through age eight. Students are provided with professional preparation in understanding stages of child growth and development, curriculum planning, teaching procedures, and program evaluation.

Students must apply for admission and be accepted into Professional Education after completion of EE 230 and before the junior professional semester. EE 230 is the only education course in which students can enroll prior to official acceptance into a Professional Education Program.

Before entering professional courses in Reading, Language Arts, Mathematics, Planning and Programming, and Science and Social Studies, a student must have a cumulative average of 2.5.

Students must complete 80 hours of prepractica experience. A 40 hour experience is attached to the course EE 230, 15 hours at a preschool level and 25 hours at the kindergarten or primary level. An additional 40 hours is attached to the professional courses; Reading, Language Arts, Mathematics, Planning and Programming, and Science and Social Studies. Undergraduates who are not taking these five courses together in a professional block must meet with their department chairperson to plan appropriate prepractica experiences.

Students completing the program will be eligible to meet Commonwealth of Massachusetts teacher certification requirements for Teacher of Early Childhood Education (N-3).

The following courses are required to complete the Early Childhood major:

- EE 230 The Basics of Early Childhood Education
- EE 300 Elementary Art Methods (.5 crs.)
- EE 352 Developmental Mathematics for the Young Child
- EE 361 Planning and Programming for the Young Child
- EE 372 Reading Development for the Young Child
- EE 462 Science and Social Studies Inquiry for the Young Child
- EE 474 Language Arts for the Young Child
- EE 496 Supervised Teaching in Public Schools
- EE 497 Supervised Teaching in Preschool

School of Education

Graduate Programs

The Department of Elementary and Early Childhood Education offers the degree of Master of Education in several areas of study: Elementary Education, Early Childhood Education, and Reading.

Students who have already earned an appropriate master's degree may focus on one or more of these areas of study as part of a Certificate of Advanced Graduate Study (CAGS) in Education program. For details consult the "CAGS in Education" description in this catalog.

Master of Education in Elementary Education Certification Program— Elementary Teacher (1-6)

Coordinator: Wayne Phillips

This master's degree program is designed for liberal arts graduates who wish to be certified as an elementary teacher (1-6). This program has been approved by the Massachusetts Department of Education and includes certification reciprocity with signatory states under the Interstate Certification Compact.

Graduate students must complete this certification program by August 1994 in order to be eligible for institutional endorsement by Bridgewater State College. Graduate students seeking professional certification should consult the section of this catalog entitled *School of Education* for information pertaining to changes in the *State Regulations for the Certification of Educational Personnel* and important institutional deadlines.

IMPORTANT: Students who will not complete the program by August, 1994, must meet with their adviser and plan an appropriate program that will lead to provisional and full certification. The adviser has specific course sequences to assist you in completing the program.

Students admitted to the certification program must complete the following courses:

Phase I

The following prerequisites should be completed before PHASE II begins.

- GP 501 Graduate Program Planning (1 cr.)
- *EE 220 Principles of Teaching (3 crs.)
- EE 300 Elementary Art Methods (.5 crs.)
- *EE 330 Teaching Reading in the Elementary School (3 crs.)
- *EE 340 Teaching Language Arts in the Elementary School (3 crs.)
- *EE 350 Teaching Mathematics in the Elementary School (3 crs.)

Additional course work to satisfy state standards in the area of subject matter may be required.

Phase II

Each student will complete 21 semester hours of study at the graduate level for master's credit. These courses should be completed before PHASE III begins.

- *EE 460 Methods and Materials in Elementary Science (3 crs.)
- *EE 470 Methods and Materials in Elementary Social Studies (3 crs.)
- EE 450 Elementary School Curriculum (3 crs.)
- GC 500 Research and Evaluation (3 crs.)
- SE 510 Exceptional Children in the Schools (3 crs.)
- ED 480 Philosophy of Education
- or
- ED 580 Philosophical Foundations of Education (3 crs.)
- ED 520 Psychological Foundations of Education (3 crs.)

*Prepractica field experience in any three of these courses must be successfully completed before entering the student teaching practicum. Typically, the courses used are EE 220 and two of the designated courses listed above that offer a prepracticum in any given semester.

Elementary and Early Childhood Education

Phase III

Each student will complete an appropriate practicum or internship:

- EE 491 Internship in Elementary Education (7.5 crs.)
or
- EE 492 Supervised Teaching in Public Schools—
Elementary (7.5 or 15 crs.**)
or
- EE 592 Practicum—Elementary Education (12 crs.**)
or
- EE 593 Internship—Elementary Education (6 crs.)

**The Elementary Practicum is usually one semester in length (15 credits). Students with full-time teaching experience of 15 consecutive weeks or more in the same classroom need only 7.5 credits (8 weeks). Students must furnish documentation of teaching experience or previous student teaching so that application for a Standard K Waiver for Part 1 of the practicum can be submitted.

Phase IV

- EE 554 Graduate Seminar in Elementary Education (3 crs.)

Each student will be required to pass a comprehensive examination prior to being eligible for the awarding of the Master's Degree in Elementary Education.

Specific course requirements may be waived by the Department of Elementary and Early Childhood Education and the School of Education, if the students' documented request is approved under state endorsed procedures.

IMPORTANT: Students who will not complete the program by August, 1994, must meet with their adviser and plan an appropriate program that will lead to provisional and full certification. The adviser has specific course sequences to assist you in completing the program.

Master of Education in Elementary Education— Program for Certified Personnel

This program is designed for certified teachers of grades one through six. All accepted students must enroll under the direction of their adviser in GP 501 Graduate

Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: GC 500 Research and Evaluation—3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements—Master of Education* in the Graduate School section of this catalog—6 graduate credits.
3. Departmental Requirements: EE 450 - Elementary School Curriculum and EE 554 - Graduate Seminar in Elementary Education.
4. Program Electives: Courses approved by the department which meet the academic and professional objectives of the student - 15 or more graduate credits.

For additional information relative to the M.Ed. in Elementary Education, students not yet accepted should consult with the program's coordinator.

Master of Education in Early Childhood Education Certification Program— Early Childhood Teacher (K-3)

Coordinator: John Marvella

This master's degree program is designed for liberal arts graduates who wish to be certified as an early childhood teacher (K-3). This program has been approved by the Massachusetts Department of Education and includes certification reciprocity with signatory states under the Interstate Certification Compact.

Graduate students must complete this certification program by August 1994, in order to be eligible for institutional endorsement by Bridgewater State College. Graduate students seeking professional certification should consult the section of this catalog entitled *School of Education* for information pertaining to changes in the *State Regulations for the Certification of Educational Personnel* and important institutional deadlines.

School of Education

Important: Students who will not complete the program by August, 1994 must meet with their adviser and plan an appropriate program that will lead to provisional and full certification. The adviser has specific course sequences to assist you in completing the program.

Students admitted to the certification program must complete the following courses:

Phase I

The following prerequisites should be completed before PHASE II begins.

- *GP 501 Graduate Program Planning (1 cr.)
- *EE 230 The Basics of Early Childhood Education (3 crs.)
- *EE 300 Elementary Art Methods (.5 crs.)
- *EE 352 Developmental Mathematics for the Young Child (3 crs.)
- *EE 372 Reading Development for the Young Child (3 crs.)
- *EE 474 Language Arts for the Young Child (3 crs.)

Additional course work to satisfy state standards in the area of subject matter may be required.

Phase II

Each student will complete 21 semester hours of study at the graduate level for master's credit. These courses should be completed before PHASE III begins.

- *EE 361 Planning and Programming for the Young Child (3 crs.)
- EE 462 Science and Social Studies Inquiry for the Young Child (3 crs.)
- EE 562 Early Childhood Curriculum—Ages 2-5 (3 crs.)
- or
- EE 563 Early Childhood Curriculum—Ages 5-7 (3 crs.)
- GC 500 Research and Evaluation (3 crs.)
- SE 510 Exceptional Children in the Schools (3 crs.)
- ED 480 Philosophy of Education
- or
- ED 580 Philosophical Foundations of Education (3 crs.)
- ED 520 Psychological Foundations of Education (3 crs.)

*Includes prepractica field experience and must be successfully completed before entering the student teaching practicum.

Phase III

Each student will complete an appropriate practicum or internship:

- EE 493 Internship in Early Childhood Education (7.5 crs.)
- EE 496 Supervised Teaching in Public School—Early Childhood (7.5 or 15 crs.**)
- EE 497 Supervised Teaching in Preschool (7.5 crs.)
- EE 596 Practicum—Early Childhood Education (12 crs.**)
- EE 597 Practicum—Preschool (12 crs.)
- EE 598 Internship—Early Childhood Education (6 crs.)

**The Early Childhood Practicum is usually one semester in length (15 credits). Students with full-time teaching experience of 15 consecutive weeks or more in the same classroom only need 7.5 credits (8 weeks). Students must furnish documentation of teaching experience or previous student teaching so that application for a Standard K Waiver for Part 1 of the practicum can be submitted.

Phase IV

- EE 575 Graduate Seminar in Early Childhood Education (3 crs.)

Each student will be required to pass a comprehensive examination prior to being eligible for the awarding of the Master's Degree in Early Childhood Education.

Specific course requirements may be waived by the Elementary and Early Childhood Education Department and the School of Education, if the students' documented request is approved under state endorsed procedures.

Important: Students who will not complete the program by August, 1994 must meet with their adviser and plan an appropriate program that will lead to provisional and full certification. The adviser has specific course sequences to assist you in completing the program.

Elementary and Early Childhood Education

Master of Education in Early Childhood Education— Program for Certified Personnel

This program is designed for persons who wish to pursue an advanced degree in early childhood education (including grades kindergarten through three) in association with careers in public schools, non-public preschools, head start centers, day care centers, and other human service agencies.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: GC 500 Research and Evaluation—3 graduate credits.
2. Humanistic and Behavioral Studies: Consult Graduate Program Requirements—Master of Education in the Graduate School section of this catalog—6 graduate credits.
3. Departmental Requirements: EE 562 Early Childhood Curriculum—Ages 2-5 or EE 563 Early Childhood Curriculum—Ages 5-7 and EE 575 Graduate Seminar in Early Childhood Education—6 graduate credits.
4. Program Electives: Courses approved by the adviser which meet the academic and professional objectives of the student—15 or more graduate credits.

Master of Education in Reading

Coordinator: Ruth Farrar

The program is designed to prepare experienced teachers for positions as consulting teachers of reading (kindergarten through grade twelve), and has been approved by the Massachusetts Department of Education. This includes certification reciprocity with signatory states under the Interstate Certification Compact. The state requirements for certification include possession of a Massachusetts classroom teaching certificate and one year of employment in the role covered by that certificate. Applicants must file the Graduate School form Certificate of Teaching. A minimum of thirty-six approved degree credits is required in this degree program.

Please note that there will be changes in state regulations governing certification in this area. Students should consult with the graduate program coordinator and their adviser regarding these projected changes.

Important: Students who will not complete the program by August, 1994 must meet with their adviser and plan an appropriate program that will lead to provisional and full certification. The adviser has specific course sequences to assist you in completing the program.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. As part of their program, students must satisfactorily complete the following curriculum:

1. Humanistic and Behavioral Studies: Consult Graduate Program Requirements—Master of Education in the Graduate School section of this catalog—6 graduate credits.
2. Departmental Requirements (which provide the theory, content, and professional practice of the specialty):
 - EE 530 Enhancing Language Skills in the Classroom
 - EE 540 Improving Reading Instruction
 - EE 541 Diagnosis and Correction of Reading Disabilities I
 - EE 542 Diagnosis and Correction of Reading Disabilities II
 - EE 544 Seminar in Reading and
 - EE 555 Supervision and Administration of Reading Programs
 - Total: 18 graduate credits.
3. Research Methods and Findings: This program requirement will be met through research components in four of the professional courses listed above (EE 540 Improving Reading Instruction, EE 541 Diagnosis and Correction of Reading Disabilities I, EE 542 Diagnosis and Correction of Reading Disabilities II, EE 555 Supervision and Administration of Reading Programs).

School of Education

4. Program Electives: Courses in reading and/or related fields, approved by the adviser, which meet the academic and professional objectives of the student, may be elected by students who are not seeking certification—3, 6 or more graduate credits.
5. Practica in Reading: the equivalent of a half-semester practicum is required for certification as a consulting teacher of reading. Students in this graduate program seeking certification as consulting teachers of reading must fulfill the requirements for clinical and supervisory components of the practicum. The program has several options which have been developed to meet the requirements of state certification while providing for the different professional circumstances of the student. These options should be discussed with the student's adviser.
6. Students not seeking certification may substitute appropriate electives for these practica.

Important: Students who will not complete the program by August, 1994 must meet with their adviser and plan an appropriate program that will lead to provisional and full certification. The adviser has specific course sequences to assist you in completing the program.

For additional information relative to this program, students not yet accepted should consult with the committee coordinator of the program.



Elementary and Early Childhood Education

Course Offerings*

EE 220 Principles of Teaching (3 crs.)

Taken by elementary students as their first course in professional education, the course will provide for observation of elementary age children in a classroom setting, opportunity for working with such children and confirmation of the choice of teaching as a career. The principles of effective teaching and classroom management will be analyzed and the use of media in developing lesson plans taught.

EE 230 The Basics of Early Childhood Education (3 crs.)

Survey of Early Childhood Education in relation to historical perspectives, philosophical foundations and sociological factors. Students will become aware of day care services. Montessori, nursery school, kindergarten and primary grades. Students will develop materials for classroom use and complete a 40-hour prepracticum in a classroom.

EE 300 Elementary Art Methods (½ cr.)

An introduction to methods and materials in art for the elementary teacher. Art projects typical of those done by children in grades K-6 are produced. Classroom management, bulletin board design, and lesson introduction techniques are explored. *Either semester*

EE 310 Teaching Science and Social Studies in the Elementary School (3 crs.)

This course will examine the development of current curriculum that will influence the teaching of science and social studies in the 1990's. Emphasis will be placed on the methodologies of these disciplines with a strong focus on cooperative learning, assessment and hands-on science.

EE 312 Educational Evaluation (3 crs.)

Students will learn the purpose of evaluation, and become familiar with some of the current trends in assessment today. The elements of broad-based assessment will be taught. Elementary statistics will be introduced. Commonly used standardized tests, their characteristics and interpretation will be studied. *(Prerequisites: PY 100 and EE 220)*

EE 330 Teaching Reading in the Elementary School (3 crs.)

A consideration of the teaching/learning processes involved in the acquisition of literacy: modeling teacher-child interactions, and independent exploration. Careful monitoring of pupil progress and appropriate interventions are emphasized.

EE 331 Developmental Reading in the Secondary School (3 crs.)

The techniques used to develop reading skills in the secondary school, evaluation of the modern reading materials available, a study of techniques used to analyze students' reading needs and a survey of administration of reading programs in the secondary school with implications for teachers as well as administrators. *Offered evenings and summers only.*

EE 333 Strategies of Teaching Reading in the Middle School (3 crs.)

The course, Strategies of Teaching Reading in the Middle School, is designed to teach the instructional models in reading necessary to aid the middle school child in the acquisition of vocabulary and skill competence. Processes for the guiding of the transfer of these skills to silent and oral reading will be taught. *Either semester*

EE 340 Teaching Language Arts in the Elementary School (3 crs.)

Strategies in the elementary school to enhance the communication skills of reading, writing, listening, and speaking through pupil involvement in purposeful communication will be stressed. Special emphasis will be given to the teaching of writing and to the development of thinking skills through questioning. *(Prerequisite: PY 100) Either semester*

EE 341 Strategies of Teaching Language Arts in the Middle School (3 crs.)

Strategies to enhance the communication skills of reading, writing, listening, speaking, through pupil involvement in purposeful communication will be stressed. Special emphasis will be given to the teaching of writing and to the development of thinking skills through questioning. *Either semester*

EE 350 Teaching Mathematics in the Elementary School (3 crs.)

Examining the purpose and content of the contemporary elementary school mathematics curriculum, this course emphasizes how children learn mathematics, a wide variety of teaching procedures and instructional materials, evaluation techniques for use in the classroom, and pedagogical methodology for individualization. Designed also to create awareness of affective experiences in the teaching/learning process of elementary school mathematics. *(Prerequisite: PY 100 and MA 105) Either semester*

EE 351 Improving Mathematical Instruction in the Elementary School (3 crs.)

Appraisal of current mathematics programs, evaluation of individual pupils within a class, consideration of current instructional procedures and materials designed to provide for individual differences. *(Prerequisite: EE 350) Offered evenings and summers only.*

EE 352 Developmental Mathematics for the Young Child (3 crs.)

Through the use of an integrated approach of content, the student will develop strategies in math that are concept oriented in which the primary emphasis is on thinking, reasoning and understanding with an emphasis on developing in young children the ability to investigate how and why things happen in math. In a prepracticum experience the student will teach a series of lessons in math at the primary level. *(Prerequisite: PY 100, MA 105 and EE 230)*

*See pages 75-76 for general information regarding course offerings.

School of Education

EE 353 Strategies of Teaching Mathematics in the Middle School (3 crs.)

Designed to present to the participant a view of the current middle school mathematics curriculum, this course shall emphasize how students learn mathematics, appropriate pedagogical and methodological techniques, evaluation procedures for use in the classroom, and techniques for individualization to allow for meaningful learning of mathematical skills and concepts. Emphasis is also placed upon participant awareness of affective as well as cognitive experiences in the middle school mathematics process. *Offered evenings and summers only.*

EE 361 Planning and Programming for the Young Child (3 crs.)
The student will become proficient in planning a developmentally appropriate program for children from infancy through age 6, incorporating classroom management, effective parent-community relationships, evaluation and multicultural education. Observation and participation component included. *(Prerequisites: PY 100 and EE 230)*

EE 362 Methods and Materials in Elementary Art (3 crs.)
The objective of art education, role of the classroom teacher, developmental stages in the creative growth of children; materials, processes, tools and teaching procedures which will foster this growth at the various grade levels; correlation of art with other subject fields and evaluation of student progress. *Offered evenings and summers only.*

EE 372 Reading Development for the Young Child (3 crs.)
Early Childhood majors learn how to create the conditions that facilitate the acquisition of literacy. The roles of print processing strategies, guided reading experiences and voluntary, independent reading are explored along with the relationship between reading and writing. Prepracticum experiences include reading aloud, shared book experiences, and teaching guided reading lessons. *(Prerequisites: PY 100 and EE 230)*

EE 373 Helping Children to Write Creatively (3 crs.)
Conducted in a positive atmosphere of support, encouragement and fun, this practical and intensive course employs a workshop format and is aimed at helping teachers to prepare creatively for a classroom emphasis on writing fluency and skill development. Participants are requested to bring a few favorite selections of children's literature. When offered as a one-week, full-time workshop, participants may have until two weeks after the end of workshop sessions to complete course requirements. *(Prerequisite: A Reading or Language Arts course)* *Offered once every three years*

EE 390 Field Based Practicum (6 crs.)
Community public schools serve as laboratories in which students engage in observation and participation in the teaching/learning process. Through active participation with the cooperating teacher the student will demonstrate an ability to sequence meaningful learning activities for individuals, small groups and total class instruction. The student teacher becomes an integral participant in the school community by gradually assuming the obligations of the classroom teacher. Throughout this experience the cooperating teacher and student teacher engage in a continuous evaluative dialogue which is designed to identify areas of strength

and weakness so that alternative strategies might be employed to enhance the student's professional growth. *(Prerequisite: PY 100, EE 220, and acceptance and good standing in Teacher Preparation Program)* *Offered only by arrangement with department (please consult the department chairperson)*

EE 400 Creative Techniques for Teaching (3 crs.)
Storytelling, creative dramatics, role playing, puppets and masks, and other speech arts, and their practical application in teaching various subjects. *(Prerequisite: CC 130)* *Either semester*

EE 420 Educational Measurement (3 crs.)
Procedures for developing and evaluating classroom teacher-made tests and a survey of standardized testing practices used in the K-12 program. Emphasis will be placed on the student's intended area and/or level of concentration. *Either semester*

EE 441 Methods & Materials in Outdoor Education for the Elementary Teacher (3 crs.)
New trends and practices in elementary curriculum and methods in outdoor education will be explored in a natural setting. Analysis of different approaches to curriculum construction, teaching procedures, integration of material to classroom and school setting will be implemented. *Offered evenings and summers only.*

EE 442 Methods and Materials in Outdoor Education II (3 crs.)
A two-phase program including two in-house weekend workshops. The course will deal with the process of individually researching, designing, and developing outdoor education projects for elementary and high school children. An emphasis will be on ocean studies and wilderness experiences. *Offered evenings and summers only*

EE 450 Elementary School Curriculum (3 crs.)
Roles of the administrator, the teacher, the parent and the child in the development of the changing curriculum in the elementary school. Use of action research, in-service training, innovations for curriculum improvement, school organizations, team teaching, the non-graded school, individualized instruction, the reevaluation of objectives and democratic values. *(Prerequisite: PY 100)* *Offered evenings and summers only.*

EE 452 Methods and Materials in Elementary Education (3 crs.)
Effective ways of vitalizing the teaching/learning process through teacher-pupil planning, participation and evaluation. Emphasis on creative teaching and the individualized approach. Materials and strategies are examined in the light of current issues. *(Prerequisite: PY 100)* *Offered evenings and summers only.*

EE 454 Seminar in Elementary Education (3 crs.)
A culmination of all professional experiences in preparation for teaching. Included are review and evaluation of current elementary school practices, discussion of professional ethics and school law, professional growth opportunities, procedures for securing a teaching position, and preparation for and the responsibilities of the first teaching position. Open to all senior elementary majors or by permission of the chairperson. *Offered evenings and summers only.*

Elementary and Early Childhood Education

EE 455 Drug Education for the Elementary School Teacher (3 crs.)

Prevention of drug abuse is the chief purpose of the course. How to acquaint elementary teachers with the causes and cure of the problem. A review of current methods and materials in drug education will be featured. *Offered evenings and summers only.*

EE 456 Current Issues in Elementary Education (3 crs.)

This course focuses on influential issues in contemporary education. Specific emphasis is placed on the following topics: financial problems; moral and ethical considerations; interplay of educational techniques; the teacher as a person and a professional; the role of the school as a change-agent in society. *(Prerequisite: PY 100 and 9 hours in education)* *Offered evenings and summers only.*

EE 457 Strategies for Managing Classroom Behavior (3 crs.)

This course will assist education students in developing their skills in classroom management. Consideration will be given to successful management models and teaching strategies as they apply to the developmental levels of children. *(Prerequisite: PY 100 or consent of the instructor)* *Offered evenings and summers only.*

EE 460 Methods and Materials in Elementary Science (3 crs.)

Goals of elementary school science instruction and the methods of attaining them through "newer" science programs, problem solving, experimentation, and varied instructional media are examined. *(Prerequisite: PY 100)* *Either semester*

EE 462 Science and Social Studies Inquiry for the Young Child (3 crs.)

The major concepts and process skills in science and social studies will be experienced. The emphasis will be on the learning environment. Students will learn how to help children move from specific information toward general statements, concepts and generalizations in an inductive process using convergent and divergent thinking. *(Prerequisites: PY 100 and EE 230)*

EE 468 Introduction to Computers for the Elementary School Classroom (3 crs.)

Designed as a computer literacy course for K-6 pre-service teachers, in-service teachers, and supervisory personnel. The course covers the history, capabilities, role, and literacy in computer education. Early childhood and elementary school applications are to be explored in a computer laboratory setting. No prior knowledge or experience with computers is assumed. *Either semester*

EE 470 Methods and Materials in Elementary Social Studies (3 crs.)

Emphasis is placed on current trends including objectives, curriculum, creative pupil-teacher planning, teaching techniques involving extensive use of instructional media and study tours of New England. *(Prerequisite: PY 100)* *Either semester*

EE 473 Improving Elementary School Social Studies (3-6 crs.)

The intent of this course is to develop with the student a series of strategies, affective as well as cognitive, that combine the best elements of the teaching-learning experience in elementary school social studies. The newest trends and practices in social studies curriculum and methodology are explored in a laboratory context. *Offered evenings and summers only.*

EE 474 Language Arts for the Young Child (3 crs.)

Through the use of an integrated approach of content, the student will develop strategies for the teaching of language arts which build on the relation of thought and word and the changes in that process that develop competencies in listening, speaking, writing and reading as a union of word and thought. *(Prerequisites: PY 100 and EE 230)*

EE 475 Seminar in Early Childhood Education (3 crs.)

Study of problems and issues related to the education of young children. Emphasis will be placed on current research, learning theories, curricular and methodological concerns. Each student will make an extensive study of a significant issue related to Early Childhood Education. *Offered evenings and summers only.*

EE 490 Supervised Teaching in the Elementary Schools—Art (7½ - 15 crs.)

Supervised experiences in classroom art activities. Experiences gained in teaching techniques, materials, individual differences, and classroom management. Supervision by the cooperating teacher and college supervisor. Full time for one quarter. *(Prerequisite: Acceptance and good standing in Teacher Preparation Program)* *Either semester*

EE 491 Internship in Elementary Education (7 crs.)

A minimum of 300 clock hours will be required in a grade 1-6 setting as an elementary teacher. Internship must be less than full time but at least 1/5 time employment as an elementary school teacher. Request for this course must be made to School of Education office. *(Prerequisite: consent of the department)*

EE 492 Supervised Teaching in Public Schools—Elementary (6 or 15 crs.)

Supervised experiences in classroom activities. Experiences gained in teaching techniques, individual differences and classroom management. Opportunities available in a variety of instructional environments. Supervision by the cooperating teacher and college supervisor. Full time for either one quarter or a full semester. *(Prerequisite: Acceptance and good standing in Teacher Preparation Program)* *Either semester*

EE 493 Internship in Early Childhood Education (7½ crs.)

A minimum of 300 clock hours will be required in an N-3 grade setting as an early childhood teacher. Internship must be less than full time but at least 1/5 time employment as an early childhood teacher. Request for this course must be made to the School of Education office. *(Prerequisite: consent of the department)*

School of Education

EE 496 Supervised Teaching in Public Schools—Early Childhood (6 or 15 crs.)

An eight or fifteen week field experience at the K-2 level under the guidance of a cooperating teacher and a college supervisor. Opportunities for participation in pupil observation, program planning and utilization of contemporary teaching strategies. *Either semester*

EE 497 Supervised Teaching in the Preschool (6-7 1/2 crs.)

Supervised student teaching experience in a preschool setting with children, infancy through age five. Emphasis on development, implementation and evaluation of innovative preschool programs. The student participates in a total program, five days a week for eight weeks in either day care center, nursery school or head start program. *Either semester*

EE 498 Internship in Elementary or Early Childhood Education (3-15 crs.)

Off-campus experience in area related to the major. In-depth exposure to educational programs, centers and institutions. This internship does not lead to teacher certification. *(Prerequisite: consent of the department, formal application required)*

EE 499 Directed Study in Elementary Education (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. *(Prerequisite: consent of the department; formal application required)* *Either semester*

Other Approved Courses:

EE 100 Effective Reading

EE 101 Speed Reading

EE 370 Kindergarten Theory and Methods

EE 371 The Preschool

EE 435 Teaching Study Skills and the Uses of Reading

EE 436 Remedial Reading Techniques for Classroom Teachers

EE 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

EE 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

EE 530 Enhancing Language Skills in the Classroom (3 crs.)

The intent of the course will be to: 1. heighten teacher perception of communication potential in the classroom, 2. suggest techniques for the use of language skills as the vehicle in all content areas, 3. assist the teacher in the design of materials to fit special needs of the classroom, 4. aid the teacher in the classroom implementation of the designed materials.

EE 540 Improving Reading Instruction (3 crs.)

Classroom practitioners identify behaviors that are demonstrated by good readers, analyze the factors in teaching that affect these behaviors and develop plans for modifying instruction. *(Prerequisite: EE 330, EE 331, or equivalent basic course in the teaching of reading)*

EE 541 Diagnosis and Correction of Reading Disabilities I (3 crs.)

Designed to prepare both elementary and secondary remedial reading teachers. Part I of this sequence will emphasize the identification of students with reading difficulties, formal and informal diagnostic procedures, and the role of standardized tests in diagnosis. *(Prerequisite: EE 540 or consent of the instructor)*

EE 542 Diagnosis and Correction of Reading Disabilities II (3 crs.)

In Part II, attention will be focused on the development of remedial plans, provision of highly motivated instruction to overcome indicated weaknesses, theories or causation and problems encountered in organizing and administering remedial programs. *(Prerequisite: EE 541 or consent of the instructor)*

EE 543 Effective Reading Programs (3 crs.)

Current and evolving practices and programs in the teaching of reading. Teachers, reading specialists and administrators will be helped to develop practical plans for insuring that their own reading programs successfully meet the needs of all their students. *(Prerequisite: 9 graduate credits in reading or consent of the instructor)*

EE 544 Seminar in Reading (3 crs.)

An intensive and in-depth review of major issues in reading education. Current trends and research are examined, and classroom applications are explored through individual and group activities. *(Prerequisite: 18 credits toward the M.Ed. in reading with a minimum of 9 credits in reading, or consent of the instructor)*

EE 545 Clinical Practicum in Remedial Reading (6 crs.)

Qualified graduate students work with school pupils assessing instructional needs, diagnosing learning difficulties, and evaluating the effectiveness of well-planned interventions. *(Prerequisite: consent of adviser)*

EE 546 Supervisory Practicum in Reading Services (6 crs.)

Candidates assume a leadership role in a school setting as they assist teachers to plan improvements in reading programs to meet teachers' assessed needs. *(Prerequisite: consent of adviser)*

EE 547 Internship in Reading (6 crs.)

Offers qualified graduate students in reading an alternative means of satisfying the practicum requirements for state certification for Consulting Teacher of Reading. *(Prerequisite: consent of adviser)*

EE 549 Reading in the Content Areas (3 crs.)

Designed in a workshop format to have students use their own textbooks to develop exercises which aid children in processing content print. Vocabulary strategies, directed reading processes, skill acquisition lessons, study guides, and levels of questioning are analyzed and utilized as they apply to the different content material.

Elementary and Early Childhood Education

EE 550 Advanced Research Topics in Elementary School Mathematics (3 crs.)

Students accepted will pursue an individualized program of advanced study and research, focused on a substantive topic pertaining to the elementary school mathematics program, and eventuating in an acceptable documented report. Periodic meetings will be scheduled by the instructor. Each student's program must be approved by the instructor and the department chairperson. *(Prerequisite: Completion of or enrollment in all other required courses in the degree program)*

EE 551 Discovering Science — Current Elementary School Science Programs (3 crs.)

Provides students with opportunities to explore the philosophy, psychology, materials, and methods of implementation of the inductive programs for elementary science and to participate in a curriculum development process. Most resource materials used originate in current elementary science programs—Elementary Science Study, Science—A Process Approach, and the Science Curriculum Improvement Study. *(Prerequisite: EE 460, EE 462 or consent of the instructor)*

EE 552 Advanced Methods for Teaching Science and Social Studies: Theory into Practice (3 crs.)

Based on the work of Project PALMS (Partnership Advancing Learning of Mathematics and Science), this course will focus on improving the way science and social studies are taught and learned in elementary school classrooms. Modules will include: constructivism; strategies for teaching using inquiry-based approaches; developing "hands-on" science and social studies materials; using technology in science and social studies; new, alternative strategies for assessment; understanding and using the new curriculum framework and national standards for both science and social studies education. Teachers will develop advanced teaching strategies that encourage students to develop "process skills" including critical graphing skills; and other skills associated with the scientific inquiry. With these skills, elementary school students will be able to achieve the goals of scientific literacy and responsible citizenship.

EE 554 Graduate Seminar in Elementary Education (3 crs.)

An integration of formal study, current research and personal experience. Each student will make an extensive study of a significant problem in elementary teaching. *(Prerequisite: Completion of all required M.Ed. courses)*

EE 555 Supervision and Administration of Reading Programs (3 crs.)

A graduate course designed to provide experiences that will provide for appraisal of the components of a reading program and examine research that suggests strategies in change behavior of teachers. *(Prerequisite: 9 graduate credits in reading)*

EE 556 Curriculum for the Gifted Child in Elementary Schools (3 crs.)

New trends and practices in curriculum development to encourage the full development of the gifted are studied. Local, regional, state and national movements are examined. Students study curriculum problems and build a curriculum.

EE 559 Special Topics in Early Childhood Education (3 crs.)

Special topics of current relevance in early childhood education will be offered from time to time. The topic to be addressed will be announced in pre-registration publications. May be taken more than once with the consent of the adviser. *(Prerequisite: Course prerequisites may be specified depending upon the nature of the topic.)*

EE 560 Special Topics in Elementary Education (3 crs.)

Special topics of current relevance in elementary education will be offered from time to time. The topic to be addressed will be announced in pre-registration publications. May be taken more than once with the consent of the adviser. *(Prerequisite: Course prerequisites may be specified depending upon the nature of the topic.)*

EE 561 Current Issues in Early Childhood Education (3 crs.)

Exploration of issues confronting the early childhood educator today. Examination of public policy issues, sex stereotyping, mainstreaming, back-to-basics, parent education, bilingual and multi-ethnic education and family structure.

EE 562 Early Childhood Curriculum - Ages 2-5 (3 crs.)

Provides students with opportunities to explore all aspects of preschool and kindergarten program curricula. Course focuses on planning and implementing curriculum in readiness skills, language development and communication arts. Observation and participation field component included.

EE 563 Early Childhood Curriculum - Ages 5-7 (3 crs.)

For students interested in planning teaching strategies for primary grades. Course explores language arts, math, science, social sciences and classroom management. Observation and participation field component included.

EE 564 Administration of Early Childhood Programs (3 crs.)

Attention is given to administration of various early childhood settings with emphasis on state licensing regulations, staff development, physical planning, budget matters, program evaluation and home-school relationships. Discussions, reading and role playing are used.

EE 565 Math Anxiety: Theories and Principles for Elementary School Personnel (3 crs.)

A comprehensive study of mathophobia. The course content, ideas, and materials promote awareness of math anxiety and of those obstacles that math avoidance creates. Emphasis on techniques and strategies in reducing math anxiety for children, or elementary school teachers, administrators, and other interested personnel.

EE 566 Technological Applications for Education (3 crs.)

This course offers the participant the opportunity to become technologically literate and to be able to create a classroom environment which allows new tools to be used for teaching and learning. An additional goal of the course is to allow the participant to work with information storage and retrieval materials linked to the curriculum in non-threatening, understandable and applicable ways.

School of Education

EE 567 Contemporary Teaching Techniques for Mathematics (3 crs.)

Along with creating a comfortable mathematics environment, this course considers how to assist the student in problem-solving processes; appraisal of current mathematical programs; diagnosing computational error patterns; integrating the computer into the mathematics curriculum. Other selected topics are explored in light of current mathematical standards and trends. *(Prerequisite: EE 350)*

EE 568 Systematic Training for Effective Teaching (3 crs.)

Systematic Training for Effective Teaching (STET) is a packaged program designed to help teachers increase effectiveness in motivating, encouraging, communicating, disciplining, leading groups, meeting special needs, and involving parents. STET promotes a democratic classroom environment where choices are clear, discipline is logical, and self-discipline is encouraged. *(Prerequisite: Bachelor's degree and teaching certificate)*

EE 572 Strategies of Teaching Reading in the Middle School (3 crs.)

Designed to teach the instructional models in reading necessary to aid the middle school child in the acquisition of vocabulary and skill competence. Processes for the guiding of the transfer of these skills to content area reading will be taught. *(Prerequisite: Bachelor's degree and teaching certificate)*

EE 573 Developing Elementary School Curriculum (3 crs.)

This course will organize its members into a curriculum committee and will, by democratic group process, prepare an elementary curriculum guide for a specific subject or subject area. Most of the resource materials used in the guide will originate in various current elementary programs. Each participant will receive a copy of the finished guide.

EE 575 Graduate Seminar in Early Childhood Education (3 crs.)

A study of problems and issues related to the education of young children. Emphasis will be placed on current research, learning theories, curricular and methodological concerns. Each student will make an extensive study of a significant issue related to Early Childhood Education. *(Prerequisite: completion of all required M.Ed. courses)*

EE 578 Educational Software Development and Computer Applications I (3 crs.)

An introduction to computer programming and to the BASIC language as it relates to the development of educational software. Significant hands-on experience with computers. As a final project, students will develop software for classroom application. *(Prerequisite: EE 468 or consent of the instructor)*

EE 579 Educational Software Development and Computer Applications II (3 crs.)

An advanced course in educational software development which focuses on high resolution graphics on the Apple II computer. Students develop several software packages for direct application in the classroom. Students interested in grades K-6 should register for EE 579. Those interested in grades 7-12 should register for ED 579. *(Prerequisite: EE/ED 578 or consent of the instructor)*

EE 580 LOGO for the Microcomputer in the Elementary Classroom (3 crs.)

LOGO is the programming language used by elementary students; one of its primary functions is to develop problem-solving skills. This course provides an overview of the history and philosophy of LOGO, practical application of the language's fundamental ideas, and covers classroom implementation. Designed for K-6 teachers and supervisory personnel. *(Prerequisite: EE 468 or consent of the instructor)*

EE 581 LOGO II and Educational Applications (3 crs.)

This course further extends participants' knowledge of the LOGO microcomputer programming language as it applies to classroom use. Topics covered include: intermediate and advanced text processing; advanced graphics; other recursions; further use of utilities programs such as shape editing, music, and animation; and educational implementation for the teacher or supervisor. Course culminates with a major project for application use. *(Prerequisite: EE 580 or consent of the instructor)*

EE 584 Educational Software Development: Files (3 crs.)

An advanced course in educational software development. Focuses on the Apple II computer stressing an understanding of the disk operating system (DOS), sequential, and random access files. A major portion of the course is devoted to students' developing software packages for application in the classroom. *(Prerequisite: EE 578 or consent of the instructor)*

EE 590 Advanced Research Topics in Computer Education for the Elementary School (3 crs.)

Students accepted will pursue an individualized program of advanced study and research on a substantive topic pertaining to computers in education, eventuating in an acceptable documented treatise. Students will plan, prepare, and implement a course of personal study as it relates to the delineated topic. Included will be a defined period of time to observe and participate in an educational field or laboratory experience germane to computers in education. Periodic meetings will be scheduled with the instructor. *(Prerequisite: completion of or enrollment in last courses of degree program)*

EE 592 Practicum—Elementary Education (12 crs.)

This graduate level practicum involves supervised experiences in classroom activities. Experiences gained in teaching techniques, individual differences and classroom management. Opportunities available in a variety of instructional environments. Supervision by the cooperating teacher and college supervisor. Full time for either one quarter or a full semester. *(Prerequisite: acceptance and good standing in Teacher Preparation Program) Either semester*

EE 593 Internship—Elementary Education (6 crs.)

In this graduate level internship, a minimum of 30 clock hours will be required in grades 1-6 setting as an elementary teacher. Internship must be less than full time but at least 1/5 time employment as an elementary school teacher. Request for this course must be made to the Professional Education office. *(Prerequisite: consent of the department)*

Elementary and Early Childhood Education

EE 596 Practicum—Early Childhood Education (12 crs.)

This graduate level practicum involves an eight or fifteen week field experience at the K-2 level under the guidance of a cooperating teacher and a college supervisor. Opportunities for participation in pupil observation, program planning and utilization of contemporary teaching strategies. (*Prerequisite: acceptance and good standing in Teacher Preparation Program*) Either semester

EE 597 Practicum—Preschool (6 crs.)

This graduate level practicum involves supervised student teaching experience in a preschool setting with children, infancy through age five. Emphasis on development, implementation and evaluation of innovative preschool programs. The student participates in a total program, five days a week for eight weeks in either day care center, nursery school or head start program. (*Prerequisite: acceptance and good standing in Teacher Preparation Program*) Either semester

EE 598 Internship—Early Childhood Education (6 crs.)

This graduate level internship involves a minimum of 300 clock hours in a N-3 grade setting as an early childhood teacher. Internship must be less than full time but at least 1/5 time employment as an early childhood teacher. Request for this course must be made to the School of Education Office. (*Prerequisite: consent of the department*)



Reading

The following represent new courses that will be part of the Master of Education in Reading program for students completing their studies after August 1994.

RD 550 Improving Literacy Instruction (3 crs.) (to replace EE 530 and EE 540)

This course is designed to assist teachers in identifying behaviors that are demonstrated by good readers and writers. Participants will analyze factors in teaching that effect these behaviors and develop plans for improving reading and writing instructions. (*Prerequisite: a basic course in the teaching of reading*)

RD 553 Topics in the Teaching of Literacy (3 crs.)

A wide ranging investigation of topics of current relevance to the societal goal of universal literacy. (*Prerequisite: a basic course in the teaching of reading*)

RD 556 Reading Practicum (3 crs.) (to replace EE 545 and EE 546)

Qualified graduate students work with students and teachers to improve teaching and learning in a school setting. (75 hours of field work) (*Prerequisite: consent of adviser*)

RD 558 Clinical Experience for a Consulting Teacher of Reading I (3 crs.)

Provisionally certified candidates assume the role of consulting teaching of reading as they work with teachers and students in a school setting (100 hours of field work). (*Prerequisite: consent of adviser*)

RD 559 Clinical Experience for a Consulting Teacher of Reading II (3 crs.)

Further school-based, field experience in the Consulting Teacher of Reading role. (100 hours of field work) (*Prerequisite: consent of adviser*)

RD 560 Research Seminar in Reading and Language (3 crs.) (to replace EE 544)

Students are guided to examine, review and analyze their graduate sequence of courses developing a new synthesis of their own graduate study and professional experience. Students will formulate an hypothesis about instruction, conduct an indepth investigation of research to support hypothesis and prepare a report on the findings including classroom application. (*Prerequisites: RD 558 or consent of the instructor*)

Department of Movement Arts, Health Promotion, and Leisure Studies

Faculty

Chairperson and Graduate Program

Coordinator: Professor Mary Lou Thornburg

Professors: Marcia Anderson, Edward Braun, Carolyn Cramer, Paul Dubois, Genevieve Fitzpatrick, Robert Frederick, Regina Gross, Janice Harris, Edward Hart, Robert Haslam, Virginia Hogg, Joseph Huber, Thomas Knudson, Shirley Krasinski

Associate Professors: Peter Mazzaferro, Nancy Moses, Amos Nwosu

Assistant Professors: Cheryl Hitchings, Joseph Yeskewicz

The Department of Movement Arts, Health Promotion, and Leisure Studies offers both undergraduate and graduate programs in the areas of Health Promotion and Physical Education.

At the undergraduate level the department offers a major in Physical Education which leads to a Bachelor of Science or Bachelor of Arts degree, and minors in Coaching, Health Promotion, Recreation and Exercise Physiology.

A minor in Dance is offered jointly by the Department of Movement Arts, Health Promotion, and Leisure

Studies and the Department of Speech Communication, Theatre Arts and Communication Disorders. For detailed information, consult the section on *Multidisciplinary and Pre-Professional Programs* in this catalog.

A minor in Health Resources Management is offered jointly by the Department of Movement Arts, Health Promotion and Leisure Studies and the Department of Management Science and Aviation Science. For detailed information, consult the section on *Multidisciplinary and Pre-Professional Programs* in this catalog.

Graduate study offered by the department includes: a program in the area of Health Promotion which leads to a Master of Education in Health Promotion, a program in the area of Physical Education which leads to a Master of Science in Physical Education.

The department also offers a variety of undergraduate and graduate courses in Movement Arts, Health Promotion and Leisure Studies for all students of the college.

Movement Arts, Health Promotion, and Leisure Studies

Undergraduate Programs

Bachelor of Arts/ Bachelor of Science

The Movement Arts, Health Promotion, and Leisure Studies Department offers the Physical Education major an opportunity to elect an area of study from among five concentrations (areas of specialization) and four Teacher Certification programs, two in Physical Education and two in Health Education.

The concentrations which are available have been developed to prepare graduates to pursue career opportunities in community-based organizations such as business, industry, agencies and hospitals. These concentrations, which include field experiences in various settings in the community, have expanded the role of the professional in the fields of physical education and health promotion beyond the teaching environment in schools, thus preparing the graduate for new career opportunities.

Teacher Certification programs in both Health and Physical Education are also available for those students who wish to teach in the public schools. These students may elect one of four Teacher Certification programs:

Teacher Certification in	
Physical Education	N-9 level
Teacher Certification in	
Physical Education	5-12 level
Teacher Certification in	
Health Education	N-9 level
Teacher Certification in	
Health Education	5-12 level

Double Major With Elementary Education, Early Childhood Education or Special Education

Students may choose a double major in Physical Education and Elementary Education, Early Childhood Education or Special Education. Appropriate advising materials with suggested course sequences are available.

Physical Education Major

Students majoring in Physical Education must complete a minimum of 120 credits for graduation. This requirement includes the following 27 credit major courses and cognates:

- PE 100 Anatomy
- PE 117 Historical and Philosophical Foundations of Sport and Physical Education
- PE 217 Principles of Motor Learning
- PE 220 Kinesiology
- PE 318 Socio-Cultural Foundations of Sport
- PE 401 Physiology of Exercise
- 9 physical education activity courses*
- Cognates:
 - BI 102 Introduction to Zoology
 - PY 100 Introductory Psychology

If a concentration is elected, 0-3 disciplinary courses may be required as specified by the department.

**Some concentrations or certification programs have specific activity requirements. Contact the department chairperson or faculty program liaison for information on these requirements.*

The remaining credits necessary for completion of the degree include the General Education Requirements and one or more of the following selections:

1. elect from the five concentrations listed below available to the Physical Education major;
2. elect a Teacher Certification option in Physical Education or Health Education;
3. develop an individualized program of study (with assistance of adviser);
4. combine the Physical Education major with a major or minor in another discipline;
5. combine several of the above;

School of Education

Athletic Training Concentration

This concentration is approved by the National Athletic Trainers Association and prepares the Physical Education major for careers related to the care and prevention of athletic injuries. This program includes injury prevention, recognition and evaluation, management and treatment, rehabilitation, organization and administration, and education and counseling of the competitive athlete. Practical application of the skills through a clinical experience is an important component of this program. Enrollment is selective; interested students should consult the department relative to this procedure.

- PE 240 Introduction into Athletic Training
- PE 241 Apprenticeship in Athletic Training
- PE 340 Sports Injury Management - Lower Extremity
- PE 341 Sports Injury Management - Upper Extremity
- PE 342 Clinical Application of Basic Athletic Training Skills
- PE 343 Clinical Application of Intermediate Athletic Training Skills
- PE 450 Therapeutic Modalities
- PE 454 Clinical Application of Advanced Athletic Training Skills
- PE 455 Professional Preparation in Athletic Training
- PE 490 Seminar in Athletic Training

Cognates:

- BI 280 Human Physiology
- HE 405 Drugs in Society
- HE 471 Nutrition
- A chemistry or physics course

Coaching Concentration

This concentration prepares the Physical Education major to apply concepts and principles related to all aspects of coaching, including: the player, team, coach, and administration of athletic programs for youth and adults. The field experience is an important aspect of this concentration.

- PE 190 Conditioning
- PE 240 Introduction into Athletic Training
- PE 325 Methods and Techniques in Coaching Individual Sports
- PE 327 Methods and Techniques in Coaching Team Sports
- PE 361 Officiating Individual Sports
- PE 362 Officiating Team Sports
- PE 414 Coaching

- PE 481 Organization and Administration of School Athletics
- PE 498 Field Experience in Physical Education
- HE 302 American Red Cross Standard First Aid
- HE 471 Nutrition

Exercise Science/ Health Fitness Concentration

This concentration prepares students for career opportunities in health and fitness in such settings as industry, hospitals, agencies, education, and human service organizations. Emphasis is on cardiovascular health, which includes: physical health evaluation, graded exercise tests, exercise prescription and physical activity program development. A field experience off campus in a setting identified above is an important aspect of this concentration.

- PE 201 Apprenticeship in Exercise Science/Health Fitness
- PE 240 Introduction into Athletic Training
- PE 402 Exercise Metabolism
- PE 403 Cardiovascular Function, Analysis and Evaluation
- PE 404 Exercise Prescription and Cardiac Rehabilitation
- PE 409 Planning, Implementing and Evaluating Fitness Programs
- PE 498 Field Experience in Physical Education
- HE 471 Nutrition

Movement Arts, Health Promotion, and Leisure Studies

Motor Development Therapy/Adapted Physical Education Concentration

This concentration prepares the physical education major to work with disabled and handicapped children, youth and adults. The program focuses on physical education to meet the developmental, sport, dance and leisure time needs of special populations as well as the emotional and social needs of those individuals. The concentration prepares graduates for career opportunities in rehabilitation centers, clinics, hospitals, social agencies and private and public schools. Opportunities for practical experience are provided through off-campus field experiences as well as the department sponsored Children's Physical Developmental Clinic.

- PE 324 Physical and Motor Development of Special Populations
- PE 451 Theoretical and Practical Use of Wheelchairs and Prosthetics for Mobility, Sports and Leisure Activity
- PE 494 Advanced Study of Motor Programs for Special Needs Children and Youth
- PE 498 Field Experience in Physical Education
- PY 224 Child Psychology
 - or
 - PY 226 Adolescent Psychology
- PY 327 Psychology of Exceptional Children
 - or
 - PY 328 Psychology of Mental Retardation
- PY 355 Behavior Modification
- PY 370 Abnormal Psychology

Recreation Concentration

This concentration provides the Physical Education major with the knowledge and skills necessary to pursue careers in a wide variety of leisure service settings. Specifically, students who have combined the study of Physical Education with the Recreation Concentration will be capable of arranging leisure time experiences and providing leadership for children and adults in government, industry, and community service agencies.

- PE 230 Introduction to Recreation
- PE 332 Leadership and the Group Process
- PE 461 Organization and Administration of Public Recreation
- PE 462 Programming for Recreation and Leisure
- PE 498 Field Experience in Physical Education (recommended elective experience)
- SO 102 Introduction to Sociology

School of Education

Teacher Certification Programs

The teacher certification options available to students are noted. Students graduating before September 1994 should see the 1992-93 *Bridgewater State College Catalog* for program requirements.

Students interested in certification for Health Education should contact the department chairperson for information concerning the current status of the program since revisions are being made.

Teacher Certification in Physical Education - (N-9)
Prerequisites:

1. Acceptance in Physical Education major
2. Acceptance in Department and School of Education Teacher Preparation Programs

Required Courses:

- PE 205 Introduction to Teaching Physical Education in the Public Schools
- PE 225 Observation and Analysis of Movement for Children
- PE 324 Physical and Motor Development of Special Populations
- PE 326 Teaching Physical Education to Children
- PE 329 Teaching and Curriculum Development in Middle and Junior High School
- PE 412 Planning, Implementation and Evaluation in Teaching Physical Education
- PE 491 Field Based Pre-practicum
- PY 224 Child Psychology
- PE 492 Practicum in Student Teaching - Physical Education

Current certificate from the American Red Cross for Standard First Aid and CPR.

Teacher Certification in Physical Education - (5-12)

Prerequisites:

1. Acceptance in Physical Education major
2. Acceptance in Department and School of Education Teacher Preparation Programs

Required Courses:

- PE 205 Introduction to Teaching Physical Education in the Public Schools
- PE 312 Strategies and Analysis of Teaching Physical Activities
- PE 315 Teaching Team and Individual Sports
- PE 324 Physical and Motor Development of Special Populations
- PE 329 Teaching and Curriculum Development in Middle and Junior High School

PE 412 Planning, Implementation and Evaluation in Teaching Physical Education

PE 491 Field Based Pre-Practicum

PY 226 Adolescent Psychology

PE 492 Practicum in Student Teaching - Physical Education

Current certificate from the American Red Cross for Standard First Aid and CPR.

Coaching Minor

The Coaching minor meets the needs of the coaching profession by providing an opportunity for students to combine the study of coaching with a major in any discipline. This multidisciplinary program approach will prepare the student for coaching related careers in community-based organizations such as youth sports programs, church programs, recreational settings and school settings.

PE 190 Conditioning

PE 217 Principles of Motor Learning

PE 220 Kinesiology

PE 240 Introduction into Athletic Training

PE 318 Socio-Cultural Foundations of Sport

PE 325 Methods and Techniques in Coaching Individual Sports

or

PE 327 Methods and Techniques in Coaching Team Sports

PE 414 Coaching

PE 498 Field Experience in Physical Education (3 crs. only)

Dance Minor

This program, offered in cooperation with the Department of Speech Communication, Theatre Arts, and Communication Disorders, is designed to give students an overall experience and appreciation for dance as an art form, educational vehicle and recreational activity. It is designed to supplement major work in Theatre Arts, Physical Education, Music, Art, and Elementary Education. For more detailed information concerning this program, please see the *Multidisciplinary and Pre-Professional Programs* section of this catalog.

Movement Arts, Health Promotion, and Leisure Studies

Exercise Physiology Minor

A minor in Exercise Physiology is available to students not majoring in physical education who desire indepth study of how the body reacts to participation in physical exercise. Emphasis is on strength development, cardiovascular function, metabolism, exercise prescription and the interaction of body systems. Career opportunities are available in health and fitness settings associated with industry, hospitals, agencies and human service organizations.

PE 400 Physiology and Techniques of Strength Fitness
PE 401 Physiology of Exercise
PE 402 Exercise Metabolism
PE 403 Cardiovascular Function, Analysis and Evaluation
PE 404 Exercise Prescription and Cardiac Rehabilitation
BI 102 Introduction to Zoology
HE 471 Nutrition

Health Promotion Minor

The department offers a Health Promotion minor which is open to all undergraduates. The Health Promotion minor provides an opportunity for students to combine the study of Health with a major in any discipline. This multidisciplinary program approach will prepare the student for Health-related careers in community-based organizations, such as business, industry, hospitals, agencies that deal with health problems, health promotion, or health services.

HE 102 Health Science
HE 430 Principles and Practices of Epidemiology
HE 474 Community Health
and either:
Community Health Promotion option
HE/SW 303 Interdisciplinary Approaches to the Development of Health Services
HE 450 Health Promotion Strategies
HE 477 Environmental Health
HE Health Elective
or
School Health Promotion option
HE 401 Human Sexuality
HE 405 Drugs in Society
HE 471 Nutrition
HE Health Elective

Students who take the Health Promotion minor and wish to be certified to teach in public schools refer to

the Teacher Certification program information of the department's offerings.

Recreation Minor

The Recreation minor is open to all undergraduates. It provides a multidisciplinary approach to producing recreation professionals capable of administering, supervising and leading leisure services. Students minoring in Recreation may choose to specialize in one of the following: Therapeutic Recreation, Outdoor Recreation, Play Specialist or Recreation Generalist. Students who complete the Recreation minor will be prepared to assume careers in a wide variety of settings -- social institutions, hospitals, business and industry, preschools, community schools, Y's, the out-of-doors (challenge/adventure/Outward Bound), government, correctional institutions.

PE 230 Introduction to Recreation
PE 332 Leadership and the Group Process
PE 461 Organization and Administration of Public Recreation

PE 462 Programming for Recreation and Leisure
Two additional courses in recreation to be chosen with department approval depending upon elected area of specialization.
PE 498 Field Experience in Physical Education (recommended elective experience)

Health Resources Management Minor

The Department of Movement Arts, Health Promotion and Leisure Studies cooperates with the Department of Management Science and Aviation Science in offering a multidisciplinary minor in Health Resources Management. Interested students should consult the *Multidisciplinary and Pre-Professional Program* section of this catalog.

School of Education

Graduate Programs

The Movement Arts, Health Promotion, and Leisure Studies Department offers programs leading to the degrees of Master of Education in Health Promotion and Master of Science in Physical Education. Please note that there will be changes in state regulations governing certification. Students should consult with the Graduate Program coordinator and their adviser regarding these changes.

Master of Education in Health Promotion

This program is designed for individuals who are currently involved in health promotion activities or who seek to prepare for health-related careers in community-based organizations such as business, industry, agencies, hospitals, and voluntary and official health agencies, as well as for in-service teachers.

Applicants who do not possess an adequate background in health and/or related areas will be required to make up course deficiencies. Such background course work will not be applied to the graduate program's minimum credit requirements.

The graduate program of study includes:

- I. GP 501 Graduate Program Planning (required of all graduate students, see Graduate Advisers and Program Planning in the *Graduate School* section of this catalog)—1 graduate credit.
- II. All master's degree candidates in Health Promotion will be required to successfully complete the following core:

HE 504 Seminar in Health Promotion Theory and Literature (3 crs.)
HE 511 Research and Evaluation Methods in Health Promotion (3 crs.)
HE 518 Quantitative Methods in Health Promotion/Epidemiology (3 crs.)
HE 519 Scientific and Philosophical Foundations of Health Promotion (3 crs.)
HE 520 Designing and Administering Health Promotion Programs (3 crs.)

III. All master's degree candidates will be required to choose one of four alternative courses of study:

Option A

1. GP 501 Graduate Program Planning (1 cr.)
2. Successful completion of the core requirements (15 crs.)
3. Individualized program of electives by advisement (18 crs.)
4. Comprehensive Examination on core requirements

Option B

1. GP 501 Graduate Program Planning (1 cr.)
2. Successful completion of the core requirements (15 crs.)
3. Individualized program of electives by advisement (15 crs.)
4. Health Promotion Project (HE 501) (3 crs.)
5. Comprehensive Examination:
Oral Defense of Health Promotion Project

Option C

1. GP 501 Graduate Program Planning (1 cr.)
2. Successful completion of the core requirements (15 crs.)
3. Individualized program of electives by advisement (12 crs.)
4. Thesis in Health Promotion (HE 502) (6 crs.)
5. Comprehensive Examination:
Oral Defense of Thesis

Option D Health Fitness Promotion Concentration

1. GP 501 Graduate Program Planning (1 cr.)
2. Successful completion of the core requirements (15 crs.)
3. Concentration Courses (18 crs.)
PE 402 Exercise Metabolism
PE 404 Exercise Prescription and Cardiac Rehabilitation
PE 544 Applied Laboratory Techniques in Exercise Science
Total of 9 semester hours selected from:
HE 430 Principles and Practice of Epidemiology
HE 471 Nutrition
HE 483 Nutrition and Cardiovascular Health
HE 501 Health Promotion Project
HE 502 Research
HE 510 Advanced Nutrition Concepts
PE 400 Physiology and Techniques of Strength Fitness
PE 405 Exercise Circulation:
Mechanisms and Morphology
PE 504 Nutrition for Sports, Exercise and Weight Control
PE 515 Advances in Exercise Circulation

Movement Arts, Health Promotion, and Leisure Studies

PE 516 Exercise Electrocardiography
PE 520 Health Fitness Program Planning and Management

PE 546 Biomechanics of Sport

4. Comprehensive Examination
 - a. Examination on core requirements
or
 - b. Oral defense of HE 501
or
 - c. Oral defense of HE 502

IV. Students who have an expressed interest in health promotion/health education in school settings will be required to complete ED 520 and ED 580 within the "electives" component of the program.

V. Students who apply for admission to the M.Ed. Program in Health Promotion should have completed at least twelve hours of credit at the baccalaureate level in the social/behavioral sciences, at least one course in epidemiology or health services organization, and six hours of credit at the baccalaureate level in health related courses. Students may petition the Department Graduate Committee to substitute job related experiences for any of the aforementioned academic requirements.

Graduate credit is given for HE courses numbered 400 and 500, except the following:

HE 491 Field Based Pre-Practicum—Health Education
HE 492 Practicum in Student Teaching—Health Education
HE 498 Field Experience in Health
HE 499 Directed Study in Health

Master of Science in Physical Education

This program is designed for individuals with an undergraduate major in Physical Education, or its equivalent, who wish to pursue new career directions related to the field in community-based organizations, such as business, industry, agencies, hospitals, and educational settings, or who wish to enhance their undergraduate preparation through advanced study. Several program concentrations are available and are described below.

Individuals who do not have an undergraduate major in Physical Education may meet this prerequisite requirement by completing a prescribed 27 credit undergraduate course sequence in Physical Education.

Such individuals should consult with the program coordinator.

The graduate program of study, involving a minimum of 31 graduate credits, includes:

1. GP 501 Graduate Program Planning (required for all students, see Graduate Advisers and Program Planning in the *Graduate School* section of this catalog)—1 graduate credit.
2. PE 511 Research Methods in Physical Education—3 graduate credits.
3. Program electives: Students must elect one of the following options:

A. Individualized Program of Study:
Development of a program of study, in consultation with the program adviser, to meet individual career and educational goals.

B. Concentration in Adapted Physical Education:
PE 451 Theoretical and Practical Use of Wheelchairs and Prosthetics for Mobility, Sports and Leisure Activity 3 credits
PE 484 Physical Education for Special Needs Children and Youth 3 credits
PE 494 Advanced Study of Motor Programs for Special Needs Children and Youth 3 credits
PE 508 Motor Learning 3 credits
PE 595 Internship in Physical Education 3-6 credits
Courses in psychology and/or special education appropriate to individual program 9 credits
Electives appropriate to program 0-3 credits

C. Concentration in Human Performance/Health Fitness:
PE 402 Exercise Metabolism 3 credits
PE 404 Exercise Prescription and Cardiac Rehabilitation 3 credits
PE 405 Exercise Circulation: Mechanics and Morphology 3 credits
PE 520 Health Fitness Program Planning and Management 3 credits
PE 544 Applied Laboratory Techniques in Exercise Science 3 credits
PE 595 Internship in Physical Education 3-6 credits

Suggested electives

Specific course selection will be made by the adviser and student based upon the student's professional background and program objectives. The following courses would be appropriate:

School of Education

- *PE 400 Physiology and Techniques of Strength
Fitness 3 credits
- *PE 403 Cardiovascular Function, Analysis and
Evaluation 3 credits
- PE 502 Research variable credits
- PE 503 Directed Study 3 credits
- PE 515 Advances in Exercise Circulation
- PE 516 Exercise Electrocardiography
- PE 517 Experimental Processes in Physical Education
- HE 471 Nutrition 3 credits
- HE 483 Nutrition and Cardiovascular
Health 3 credits
- HE 518 Quantitative Methods in Health Promotion
and Epidemiology 3 credits

*Recommended based on student's program. Both may be taken.

Graduate credit can be given for courses numbered 400 and 500 except the following:

PE 415 through PE 431

PE 491 Field Based Pre-Practicum—Physical Education

PE 492 Practicum in Student Teaching—Physical Education

PE 498 Field Experience in Physical Education

PE 499 Directed Study in Physical Education



Movement Arts, Health Promotion, and Leisure Studies

Course Offerings*

Health

HE 102 Health Science (3 crs.)

Attitudes and practices as they influence effective living; common adult health problems; community health standards and services; special problems of community health. *Either semester*

HE 135-136 Freshman Honors Colloquium (1 cr. each semester)
Freshman Honors Colloquia in Health allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) *HE 135 fall semester, HE 136 spring semester*

HE 200 Principles and Practices of Health Education (3 crs.)

Selection of content for health courses with emphasis on current trends; analysis of the learning and teaching process as applied to health education. (*Prerequisite: HE 102*) *Either semester*

HE 286-287 Sophomore Honors Colloquium (1 cr. each semester)
Sophomore Honors Colloquia in Health allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) *HE 286 fall semester, HE 287 spring semester*

HE 300 Current Issues in Health (3 crs.)

Designed to acquaint the students with current health issues and trends related to the school and community. (*Prerequisite: HE 102*) *Once each year*

HE 302 American Red Cross Standard First Aid (1 cr.)

The purpose of the American Red Cross Standard First Aid course is to train students to help people in emergencies. This course teaches the standard first aid skills a person needs to act as the first link in the emergency medical service system. *Either semester*

HE/SW 303 Interdisciplinary Approaches to the Delivery of Health Services (3 crs.)

A wide range of interdisciplinary health team approaches will be analyzed. The field component is observational and will provide insight into the pragmatic realities of a health team. This course will be a first exposure to the theoretical and experiential dynamics of interdisciplinary approaches to delivery of health services. Disciplines involved include social work, health, psychology, nursing and medicine. (*Prerequisite: 6 credits in Health and Social Work or Health-related areas*) *Offered alternate years*

HE 401 Human Sexuality (3 crs.)

This course deals with issues of sexual response, including dysfunction and reproduction. Also included are discussions of sexual styles and expressions as they impact upon the biosocial and political climate of the times. Topics of indepth analysis may focus upon IVF issues, fertility control and sexually transmitted diseases.

HE/SW 403 Interdisciplinary Approaches to the Delivery of Health Services (3 crs.)

A wide range of interdisciplinary health team approaches will be analyzed. The field component is observational and will provide insight into the pragmatic realities of a health team. This course will be a first exposure to the theoretical and experiential dynamics of interdisciplinary approaches to delivery of health services. Disciplines involved include social work, health, psychology, nursing and medicine. *For graduate credit only. (Prerequisite: 6 credits in Health and Social Work or Health-related areas)* *Offered alternate years*

HE 405 Drugs in Society (3 crs.)

Study of the impact of the environmental and cultural values affecting the drug using population. Views on subculture and alternative life styles and the forces that shape them. Understanding trends of modern treatment facilities and rehabilitation procedures. Emphasis on alternatives to drug use. *Either semester*

HE 430 Principles and Practice of Epidemiology (3 crs.)

This course is designed to acquaint students with the principles, methods, and approaches to the study of patterns of disease and the health conditions which might influence disease in human populations. It also includes factors that influence occurrence and the applications of epidemiological methods for prevention and control. (*Prerequisite: junior standing or consent of the instructor*)

HE 450 Health Promotion Strategies (3 crs.)

Current strategies and techniques for transmitting information will be analyzed. Students will develop and evaluate strategies and techniques for promoting health information and wellness behaviors in a variety of settings.

HE 471 Nutrition (3 crs.)

Nutrition and its relation to cultural patterns, dental health, total health and fitness, weight control and purchasing and preparation of food. *Either semester*

HE 474 Community Health (3 crs.)

The history and development of public health programs, the relationships of health departments—local, state and federal—public and private agencies, and the school health program. Problems and principles of the community health programs based on local needs. Designed for classroom teachers, health specialists and others interested in community health. *Offered once per year*

HE 477 Environmental Health (3 crs.)

Study of selected environmental influences, and how they affect health. Proposal and action-oriented suggestions for bringing about change. Understanding pressure tactics, political influences, resistive forces and strategies for dealing with them. Exploration

*See pages 75-76 for general information regarding course offerings.

School of Education

of legal structure, geographical difficulties, priority establishment and safety tolerances.

HE 478 Consumer Health (3 crs.)

Course designed to help people make informed decisions regarding their best use of health products and services. Topics to be covered include health insurance, life insurance, credit buying, quacks, patent medicines, fad diets, food buying, criteria for selecting health service, identifying subtleties in advertising and understanding the misconceptions concerning health.

HE 480 Family Life and Sex Education (3 crs.)

Curriculum development and implementation strategies for comprehensive school-community based sexuality education. The course deals with a variety of sexuality issues including STDs, fertility and contemporary social issues of sexism and aggression.

HE 482 Health Education in the Elementary Schools (3 crs.)

Study of the identification and appraisal of physical, emotional, and social health problems of elementary school children. Focus on teachers' approaches toward health education and the creation of an emotionally, socially and intellectually healthy classroom environment. *Either semester*

HE 483 Nutrition and Cardiovascular Health (3 crs.)

This course will deal with the selection of nutritional foods throughout the life cycle with specific emphasis on how cardiovascular health may be maintained and/or improved by proper nutritional practices. *(Prerequisite: one course in nutrition or a scientifically-based course that includes topics of nutrition)* Offered once per year

HE 484 Death and Dying Education (3 crs.)

A study of the health issues (physical, emotional and social) related to terminal illness and death.

HE 485 Medical and Scientific Aspects of Human Sexuality (3 crs.)

The purpose of this course is to update the advanced sexuality student on medical research as it relates to human sexuality. Course content may consider such issues as fertility medications, sexual dysfunction, as well as research on variations in sexual styles. *(Prerequisite: HE 401 or consent of the instructor)*

HE 491 Field Based Pre-Practicum--Health Education (2 crs.)

This course is designed to provide the student with an introduction to teaching health education in an off-campus setting. *Either semester*

HE 492 Practicum in Student Teaching--Health (12 crs.)

Full-time teaching for one semester with supervision provided by members of the department. *(Prerequisite: acceptance and good standing in Teacher Preparation Program and satisfactorily completed Department Teacher Preparation Program courses)* *Either semester*

HE 498 Field Experience in Health (3-15 crs.)

A field experience offers qualified students the opportunity to gain practical off-campus experience in health. Placements are made in both public and private agencies and are designed to complement a student's concentration or minor in health.

(Prerequisite: consent of the department; formal application required)
Either semester

HE 499 Directed Study in Health (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. *(Prerequisite: consent of the department; formal application required)* *Either semester*

Other Approved Courses:

HE 475 Theoretical Basis of Health Instruction

HE 481 Selected Health Issues

HE 501 Health Promotion Project (3 crs.)

Individual health promotion project is planned, implemented and evaluated under the direct supervision of a faculty mentor.

HE 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

HE 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

HE 504 Seminar in Health Promotion Theory and Literature (3 crs.)

This course is designed to orient the graduate student to the process of a formal literature review and the subsequent theory that ensues. The student will be required to complete a comprehensive literature review and deliver a formal seminar report.

HE 508 Health Crisis Intervention (3 crs.)

Dealing with mental, emotional and social health problems of the individual, the family and society. Exploration of suicide education, death education and psychosomatic illness. Investigation and practice of techniques of aiding the potential suicide; the tripping drug user; the chronic alcoholic; the obese, neurotic, and promiscuous; geriatric problems; and health care availability. Course will consider agency roles in these areas. *(Prerequisite: six credits in health)*

HE 509 Occupational Health and Safety (3 crs.)

Study of the potential health and safety hazards in different occupational environments and intervention measures to reduce or eliminate exposures.

HE 510 Advanced Nutrition Concepts (3 crs.)

An advanced course in nutrition with emphasis on current nutritional concepts and a critical analysis of major nutritional issues. *(Prerequisite: HE 471 or a nutrition course)*

HE 511 Research and Evaluation Methods in Health Promotion (3 crs.)

This course will develop competencies needed to both produce and consume research in health promotion and allied areas. Via

Movement Arts, Health Promotion, and Leisure Studies

the development of a research proposal, students will gain an understanding of such research techniques as problem formulation, literature review, sampling, hypothesis construction, research design, instrumentation, and data analysis.

HE 513 International Health (3 crs.)

An overview of health status, health programs and trends in health care delivery systems in various countries in the world. Consideration of socio-cultural influences on health and disease of various ethnic groups in the United States will be explored. Major emphasis is placed on culture and environment as they relate to health practices of various subcultures in the U.S. and developing nations. The course is particularly beneficial for those interested in working in international health settings.

HE 514 Selected Topics in Environmental Health (3 crs.)

An in-depth study of important environmental health issues. The topics discussed will provide the information needed to make intelligent decisions regarding critical environmental health problems.

HE 515 Organization and Administration of Comprehensive School Health Programs (3 crs.)

The four major areas of comprehensive school health organization (foundations, environment, services, and instruction) will be examined. The interrelationship between school health and public health programs will be discussed while emphasizing the planning, implementation, and evaluation of the comprehensive school health program.

HE 516 Family Life and Sex Education (3 crs.)

Curriculum development and implementation strategies for comprehensive school-community based sexuality education. The course deals with a variety of sexuality issues including STDs, fertility and contemporary social issues of sexism and aggression. *(Prerequisite: at least one course in human sexuality and consent of the instructor)*

HE 518 Quantitative Methods in Health Promotion/ Epidemiology (3 crs.)

This is an introductory course in quantitative methods in epidemiology and health promotion. The course includes inferential and descriptive techniques as well as life table construction, and epidemiological rates, ratios and proportions.

HE 519 Scientific and Philosophical Foundations of Health Promotion (3 crs.)

The focus of this course is on surveying and providing the historical/philosophical foundations of health promotion and provide a scientific basis for the development of health promotion programs.

HE 520 Designing and Administering Health Promotion Programs (3 crs.)

Analysis and skill development in administration of health promotion programs in a variety of settings with emphasis on administrative issues, staff development and consultation.

HE/SE 530 Module A: Exceptional Learner in the Classroom (1 cr.)

An orientation to all aspects of education pertaining to the learner with special needs. Emphasis will be on educational characteristics of each area of exceptionality. Skills will be developed for developing appropriate institutional strategies, techniques, and curriculum adaptations to promote successful learning of the learner with special needs.

HE/SE 530 Module B: Health and Medical Issues Related to Mainstreaming (1 cr.)

Health and medical issues are examined in relation to the educational needs of the learner with special needs. Physical, emotional and social needs of the learner are considered in light of the appropriate medical and social science research related to special needs.

HE/SE 530 Module C: Comprehensive Elementary School Health Program (1 cr.)

Aspects of the Comprehensive School Health Program related to the role of the K-6 classroom teacher will be examined.

HE 594 Educational Approaches to Changing Drug Use Behavior (3 crs.)

The focus of this course is drug abuse problems in youthful populations. The importance of teachers developing their own self-awareness and using early intervention strategies is emphasized. Teachers at the elementary and secondary levels will experience a variety of methodologies intended to equip them with strategies for changing student behaviors in respect to present or intended drug use. All course participants will develop skills in assessing student needs, planning and implementing drug education programs, and evaluating their effectiveness in changing attitudes, beliefs, values and behaviors related to drug use. *(Prerequisite: At least one course pertaining to drugs and consent of the instructor)*

School of Education

Physical Education

PE 100 Anatomy (3 crs.)

Includes a fundamental study of the human body and its parts, with special emphasis on bones, muscles, and tissues. *Either semester*

PE 117 Historical and Philosophical Foundations of Sport and Physical Education (3 crs.)

An historical and philosophical study of sport and physical education, including an overview of the biological and normative/humanities areas constituting the discipline of sport studies. *Either semester*

PE 135-136 Freshman Honors Colloquium (1 cr. each semester)

Freshman Honors Colloquia in Physical Education allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: Consent of the instructor*) PE 135 fall semester, PE 136 spring semester

*PE/CT 146 Dance Appreciation (3 crs.)

This course explores the basic components of dance and enables students to appreciate the art of dance as an informed audience and as participants in its rich variety. Satisfies the GER in Artistic Modes of Expression.

‡PE/CT 155 Dance Practicum (1 cr.)

In this class students will choreograph and rehearse dances for a concert performance. Concurrent enrollment in a dance class is strongly advised. *Fall semester is open to all; spring semester is open by audition only.*

*PE/CT 156 Movement and Dance for Actors (3 crs.)

Exercises in developing and communicating a character through movement. Introduction to theatre movement, including jazz dance, tap and mime.

**Offered for credit in both the Movement Arts, Health Promotion, and Leisure Studies and the Speech Communication, Theatre Arts and Communication Disorders Departments.*

‡Note: From the one-credit co-curricular activity, PE/CT 155, and from any and all co-curricular activities for which the college grants credit, a student may accumulate not more than one credit per semester (two per year) nor more than six per four-year degree program.

EXCEPTION: All one credit co-curricular and Physical Education activity courses that are required for officially enrolled and graduating students in an approved major, concentration or minor may be counted towards graduation.

PE 180 Coaching Basics (1 cr.)

This course provides an introduction to the skills and knowledge essential to coaching at any level. The student may also elect to be certified as a "Level 1" coach by the American Coaching Effectiveness Program.

PE 201 Apprenticeship in Exercise Science/Health Fitness (1 cr.)

The course is an introductory field-work experience in the design and conduct of preventive and rehabilitative exercise programs. In addition to the class work, the student will observe and assist in the operation and supervision of an established program. *Either semester*

PE 205 Introduction to Teaching Physical Education in the Public Schools (2 cr.)

This course is designed to give students information about teaching physical education as a profession. Through discussion and direct observation of the teaching-learning environment, students will be able to study and observe the characteristics of learners of different age and grade levels as well as the philosophy, goals and objectives of programs for various certification levels. *Fall semester*

PE 217 Principles of Motor Learning (3 crs.)

Introduces the student to the concepts and principles concerned with learning and performance of movement skills. *Either semester*

PE 220 Kinesiology (3 crs.)

Introduces the student to the concepts and principles of biomechanics as they relate to sport and recreational skills. *Either semester*

PE 225 Observation and Analysis of Movement for Children (4 cr.)

An introduction to the movement approach to games, dance, and gymnastics with emphasis on program content and progression using the thematic approach. (*Prerequisite: PE 205*) *Spring semester*

PE 230 Introduction to Recreation (3 crs.)

The history of recreation from primitive man to the present. Philosophies of recreation, leisure, work and play are presented. Recreation services and career opportunities are discussed. Professional organizations and literature are reviewed. *Fall semester*

PE 240 Introduction into Athletic Training (3 crs.)

Introduces the physical education major into the field of athletic training including the role of the coach and athletic trainer in providing sports injury management, taping and use of immobilization devices, basic injury evaluation, and rehabilitation principles. Two hour lecture and two hours laboratory. (*Prerequisite: PE 100*) *Offered every semester.*

PE 241 Apprenticeship in Athletic Training (3 crs.)

Introduces the athletic training student into the clinical aspect of the athletic training profession. Clinical hours working with the intercollegiate teams will be supplemented by bi-monthly seminars on issues and skills associated with the professional development of the athletic trainer. (*Prerequisite: consent of the coordinator of the Athletic Training Concentration*)

Movement Arts, Health Promotion, and Leisure Studies

***PE/CT 251 Dance History (3 crs.)**

This course will offer an examination of dance as a social and artistic force from primitive to modern times. Class will include lecture and film, as well as performance of dances in historical styles. Satisfies the GER in Artistic Modes of Expression

PE 252 Water Safety Instructor (3 crs.)

Instruction in pedagogy and methodology for teaching swimming, lifeguarding, and water safety. Students who demonstrate a high level of skill and who demonstrate the necessary teaching competencies will earn Red Cross certification as Water Safety Instructors. (*Prerequisites: Red Cross Certification in Emergency Water Safety or Lifeguard Training and Red Cross "Swimmer" level of proficiency*)

***PE/CT 255 Creative Dance I (3 crs.)**

This course will investigate the theory of dance through participation, composition, lecture, discussion and film. Students will learn about the elements of space, time, force, movement and style. Satisfies the GER in Artistic Modes of Expression. *Fall semester*

***PE/CT 256 Creative Dance II (3 crs.)**

The use of basic elements of dance to form a set movement composition. Exercises in choreography and experiences in setting a dance for performance. (*Prerequisite: CT/PE 255*) *Spring semester*

***PE/CT 259 Dance Repertory (1 cr.)**

Students will be taught a major choreographic work by faculty and/or guest artists. *Spring semester*

PE 286-287 Sophomore Honors Colloquium (1 cr. each semester)

Sophomore Honors Colloquia in Physical Education allow exceptionally able students to explore a challenging topic in small classes under close faculty supervision. Colloquia meet once a week for fifty minutes and culminate in a paper or scientific project which provides the major part of the grade. Open to All-College Honors students and to others at the discretion of the instructor. The minimum enrollment is two and the maximum is twelve. Topics vary from semester to semester. (*Prerequisite: consent of the instructor*) *PE 286 fall semester, PE 287 spring semester*

PE 312 Strategies and Analysis in Teaching Physical Activities (3 crs.)

Designed to prepare the student with an understanding of the learning and development of skill performance. Major emphasis will be placed on basic motor skills including learning progression, skill analysis, error correction, organizational patterns, teaching strategies and performance evaluation. (*Prerequisite: PE 205, PE 217, PE 220*) *Spring semester*

**Offered for credit in both the Movement Arts, Health Promotion, and Leisure Studies and the Speech Communication, Theatre Arts and Communication Disorders Departments.*

PE 315 Teaching Team and Individual Sports (4 crs.)

Methodologies, teaching strategies, materials and media for introducing, developing and evaluating skills and knowledge of selected team and individual sports. (*Prq: PE 312*) *Fall semester*

PE 318 Socio-Cultural Foundations of Sport (3 crs.)

This course provides an introduction to the study of sport as a social institution and an element of culture. Major topics include the roles of sport in society, the relationship of sport to other social institutions and variations in sport across cultures. *Either semester*

PE 320 Physical Education for Youth in Grades 1-6 (3 crs.)

A study of the philosophy and objectives of the elementary school physical education program. Emphasis on the role and responsibilities of the classroom teacher in the program with laboratory experiences teaching children. *Either semester*

PE 322 Physical Activities for Early Childhood (3 crs.)

Emphasis will be placed on gaining knowledge about physical growth and the stages of motor development. The movement education approach will be utilized to integrate physical education with the early childhood curriculum.

PE 324 Physical and Motor Development of Special Populations (3 crs.)

This course addresses the etiology, treatment, developmental sequence and functional abilities of disabled and handicapped populations. The course also emphasizes concepts of physical fitness, motor and physical skill development, concepts related to competitive and cooperative social interaction as well as the constructive use of leisure. Topics presented will include the visually impaired, blind, mentally retarded, cerebral palsy, spina bifida, muscular dystrophy, and postural disorders. The diagnostic prescriptive process will be stressed along with the latest screening and assessment instruments and techniques. (*Prerequisite: PE 217*) *Either semester*

PE 325 Methods and Techniques in Coaching Individual Sports (1 cr.)

A brief theoretical study of individual sports, offensive and defensive fundamentals and strategies, and responsibilities regarding administration of practice and performance.

PE 326 Teaching Physical Education to Children (3 crs.)

A study of the movement approach to teaching physical education to children with emphasis on developing content and methodology. Student will engage in pre-practicum experience with children in an on-campus setting focusing on: developing, analyzing, and improving teaching behavior and developing teaching materials. (*Prerequisite: PE 205, PE 225*) *Fall semester*

PE 327 Methods and Techniques in Coaching Team Sports (1 cr.)

A brief theoretical study of team sports, offensive and defensive fundamentals and strategies, and responsibilities regarding administration of practice and performance.

School of Education

PE 329 Teaching and Curriculum Development in the Middle and Junior High School (3 crs.)

This course will focus on teaching and curriculum development for physical education in the middle and junior high school. Emphasis will be placed on important trends in our society and an understanding of what physical education can and should mean to the education of transescents. Teaching concepts as well as equity issues, comprehensive curriculum planning and evaluation will be studied. (*Prq: PE 225 or PE 312*) *Either semester*

PE 330 Theory and Principles of Leisure (3 crs.)

A course designed to provide the student an opportunity to explore the impact of leisure on society and the individual. Economic, educational, social and psychological phenomena and the force each has on leisure are examined. *Offered alternate years*

PE 331 Outdoor Recreation Resources (3 crs.)

Study of the design, effective use, management and programs of outdoor recreation and conservation areas.

PE 332 Leadership and the Group Process (3 crs.)

This course provides theory and experiences necessary to develop an understanding of leadership, group dynamics and effective group skills.

PE 333 Camp Leadership and Organized Camping (3 crs.)

A study of organized camps and camping programs with particular emphasis on program planning, selection and training of staff, and administrative details in organized camping. *Offered alternate years*

PE 340 Sports Injury Management—Lower Extremity (3 crs.)

Application of joint and musculoskeletal anatomy in the prevention, recognition, and management of athletic injuries to the lower extremity. Two hours lecture and two hours laboratory. (*Prerequisite: PE 240*) *Fall semester only.*

PE 341 Sports Injury Management—Upper Extremity (3 crs.)

Application of joint and musculoskeletal anatomy in the prevention recognition and management of athletic injuries to the upper extremity, head and neck. Two hour lecture and two hours laboratory. (*Prerequisite: PE 240*) *Spring semester only.*

PE 342 Clinical Application of Basic Athletic Training Skills (3 crs.)

Clinical application of the skills and techniques used in the athletic training profession. The clinical experience will be enhanced with regular seminars on issues and topics pertinent to the professional. (*Prerequisite: PE 241*)

PE 343 Clinical Application of Intermediate Athletic Training Skills (3 crs.)

Clinical application of the skills and techniques used in the athletic training profession. The clinical experience will be enhanced with regular seminars on issues and topics pertinent to the professional. (*Prerequisite: PE 342*)

**Offered for credit in both the Movement Arts, Health Promotion, and Leisure Studies and the Speech Communication, Theatre Arts and Communication Disorders Departments.*

PE 345 Sport and Physical Education in East Asian Cultures (3 crs.)

This course investigates and contrasts the role of sport and physical education in various East Asian cultures. History, attitudes and practices, cultural influences and current trends form the basis for study and discussion. The relationship to Western practices will be discussed. Satisfies the GER in Non-Western Civilization

*PE/CT 357 Dance Production Theory (2 crs.)

This course provides the opportunity to choreograph and plan the presentation of a major dance work. Lectures and practical assignments in choreography and stagecraft for dance will result in a plan for a dance piece. (*Prerequisite: PE/CT 255 and PE/CT 256, or consent of the instructor*) *Fall semester*

*PE/CT 358 Dance Production Techniques (1 cr.)

This course is an extension of PE/CT 357 Dance Production Theory, and provides an opportunity for students to set a choreographed work for dancers and to rehearse it for presentation. *Spring semester*

PE 361 Officiating Individual Sports (1 cr.)

A study of the rules, techniques and mechanics in sports officiating. (Tennis, track and field, wrestling)

PE 362 Officiating Team Sports (1 cr.)

A study of the rules, techniques and mechanic in sports officiating. (Football, basketball, softball/baseball, field hockey, lacrosse, volleyball, soccer)

PE 400 Physiology and Techniques of Strength Fitness (3 crs.)

To provide students with a knowledge of the effects of heavy resistance exercise training protocols on musculo-skeletal integrity, metabolic capacity and various specific tissue characteristics in the human body. Thus, the course necessarily considers micro-anatomical and physiological variations associated with general strength conditioning programs, body building, olympic lifting, power lifting, circuit training, variable resistance, isometric, isokinetic and isometric resistance training. *Fall semester*

PE 401 Physiology of Exercise (3 crs.)

Includes the study of systems, their interrelationships and adjustments during exercise and as a result of training. Emphasis is on current research findings and what remains to be discovered in man as a moving being. Two hours of lecture and one two-hour laboratory period weekly. (*Prerequisite: BI 102*) *Either semester*

PE 402 Exercise Metabolism (3 crs.)

An in-depth study of human physiological principles as applied to exercise, sport activity and research. Special emphasis is on neurological control, exercise in relation to cardiovascular disease, and factors affecting performance. (*Prerequisite: PE 401 or equivalent*) *Offered alternate semesters*

Movement Arts, Health Promotion, and Leisure Studies

PE 403 Cardiovascular Function, Analysis and Evaluation (3 crs.)

Includes cardiovascular dynamics as studied through anatomy, electrophysiology, and the pathology of the cardiovascular system. Specific emphasis will be placed on the analysis of the cardiovascular system through non-invasive methods of evaluation. *(Prerequisite: PE 401 or equivalent)* Offered alternate semesters

PE 404 Exercise Prescription and Cardiac Rehabilitation (3 crs.)

This course focuses on the development of individualized prescriptive exercise programming with regard to stress test evaluations and individual contraindications. Environmental conditions along with intensity, duration and frequency of physical activity will be studied in order to develop programs. Special attention will be given to high-risk populations and post-cardiac patients. *(Prerequisite: PE 401 or equivalent)* Offered alternate semesters

PE 405 Exercise Circulation: Mechanisms and Morphology (3 crs.)

This course provides students with a knowledge and understanding of the acute and chronic effects of exercise on the peripheral and central circulatory systems. It deals with exercise related cardiovascular dynamics, effects of frequently used medications and growth responses induced by regular exercise as well as abnormal physiological responses to exercise. *(Prerequisite: PE 401)*

PE 409 Planning, Implementing and Evaluating Fitness Programs (3 crs.)

This course provides students with skills needed to develop, implement and evaluate programs in fitness and rehabilitative exercise centers. Emphasis will be placed on program development, on providing instruction to individuals and groups and on administrative tasks expected of the entry level fitness professional. *Fall semester*

PE 412 Planning, Implementation, and Evaluation in Teaching Physical Education (6 crs.)

Designed to develop teaching competencies related to the planning, implementation, and evaluation aspects of instructional programs in physical education. Course will include current research on effective teaching, peer teaching and video tape analysis of teacher and student behavior. *(Prerequisite: PE 205, PE 217)* Either semester

PE 414 Coaching (3 crs.)

The application of teaching and learning principles as related to the player, team, coach and the athletic program. Areas to be included will be psychology and philosophy of coaching, organization and administration of the program, coaching techniques, conditioning and evaluative procedures. *Either semester*

PE 445 Adventure Programs (3 crs.)

The planning and development of adventure and challenge programs in physical education and related disciplines. Students will be involved in theoretical and practical aspects of adventure curriculums and will be expected to participate in a variety of activities, primarily in the out of doors. Topics will include

backpacking, rock climbing, orienteering, winter camping, survival, and ropes course activities.

PE 446 Advanced Adventure Programs (3 crs.)

This course builds on basic adventure program knowledges and skills providing experiences in planning and conducting activities of an Outward Bound nature. Particular attention will be given to leadership technique. *(Prerequisite: PE 445 or equivalent experience)*

PE 447 Ropes Course Use and Construction (3 crs.)

Instruction in the theoretical and practical aspects of Ropes Course use and instruction and experience in constructing Ropes Course elements.

PE 450 Therapeutic Modalities (2 crs.)

This course will introduce the athletic training student to therapeutic modalities used in sports medicine. A one hour lecture and two hour laboratory will provide practical application of clinical skills including indications, contraindication, and record keeping associated with patient care. *(Prerequisite: PE 240)*

PE 451 Theoretical and Practical Use of Wheelchairs and Prosthetics for Mobility, Sports and Leisure Activity (3 crs.)

Designed for the professional who works with the disabled and handicapped. The theoretical and practical use of wheelchairs for mobility and participation in sports, leisure activities, as well as the importance of such participation for rehabilitation will be discussed and analyzed. *Offered once per year*

PE 454 Clinical Application of Advanced Athletic Training Skills (3 crs.)

Clinical application of the skills and techniques used in the athletic training profession. The clinical experience will be enhanced with regular seminars on issues and topics pertinent to the professional. *(Prerequisite: PE 343)*

PE 455 Professional Preparation in Athletic Training (3 crs.)

Clinical application of the skills and techniques used in the athletic training profession. The clinical experience will be enhanced with regular seminars on issues and topics pertinent to the professional. *(Prerequisite: PE 454)*

PE 460 Park and Recreation Facilities (3 crs.)

A study of planning, development, and maintenance of parks and recreation facilities; includes inspection of areas and preparation of plans. *Offered once in three years*

PE 461 Organization and Administration of Public Recreation (3 crs.)

Organization and administration of recreation at federal, state and local levels; legislative provisions, governmental control, financing, budget, personnel, departmental organization, and administrative practices. *Spring semester*

PE 462 Programming for Recreation and Leisure (3 crs.)

The opportunity to plan, conduct, evaluate and observe a wide variety of both on-campus and community-based programs and activities. *Spring semester*

School of Education

PE 463 Field Problems in Recreation (3 crs.)

A study of selected problems in various areas of recreation through guided individual and group field experience. *(Prerequisite: consent of the instructor) Offered alternate years*

PE 465 Theory and Development of Play (3 crs.)

Provides theoretical foundations for play based on classical and modern theories and on research findings. *Either semester*

PE 470 Sociology of Sport (3 crs.)

Analysis of the types of forces at work in American society and how they relate to sports. Among the topics to be included are the influences of our cultural heritage, philosophy of education, politics, religion, economy, ethnics, mass media, and internationalism. Lectures, readings, class discussions, and written assignments will be directed toward enhancing the individual's understanding of the values of sport in our society. *(Prerequisite: three credits in Sociology)*

PE 475 Games Leadership Workshop (3 crs.)

This workshop is designed for people interested in building relationships through play in games. The games emphasis will move away from the familiar competitive play experience to the non-competitive, supportive and cooperative play experience. Participants will develop a repertoire of games suitable for all ages. Leadership competence will provide participants with the tools to take games to others in schools, business, community groups and the family.

PE 481 Organization and Administration of School Athletics (3 crs.)

Athletic policies and regulations on the local and state levels, administrative plans, contest management, the purchase and care of equipment, athletic awards, finance and budget, athletic facilities, scheduling, public relations, the intramural program, and trends in interscholastic athletics.

PE 484 Physical Education for Special Needs Children and Youth (3 crs.)

The planning and development of physical education programs considered appropriate to the needs, interests and abilities of exceptional children and youth. Emphasis will be placed on the contribution that physical education can make to the education and well being of the physically, mentally and emotionally handicapped.

PE 490 Seminar in Athletic Training (3 crs.)

Study of various topics confronting an athletic trainer. These experiences are developed through lectures, demonstrations, and discussions with authorities, including physicians and lawyers, in the areas of concern. *(Prerequisite: PE 240 and PE 340) Offered alternate years*

PE 491 Field Based Pre-Practicum--Physical Education (2 crs.)

Designed to provide the student with field based teaching experiences in selected settings. *(Prerequisite: PE 329, PE 412, PE 315 or PE 326 and acceptance and good standing in department and College Teacher Preparation Programs) One quarter either semester*

PE 492 Practicum in Student Teaching--Physical Education (12 crs.)

Full-time teaching for one semester with supervision provided by members of the department faculty. *(Prerequisite: acceptance and good standing in Teacher Preparation Program and satisfactorily completed department Teacher Preparation Program courses) Either semester*

PE 494 Advanced Study of Motor Programs for Special Needs Children and Youth (3 crs.)

Included is the study of nutritional disturbances, emotionally disturbed, socially maladjusted, disadvantaged, and chronic medical problems. A culmination of professional experiences to include a study of perceptual motor programs, behavior modification, advanced techniques of motor assessment and grantmanship. The role of the adapted physical educator as a resource and itinerant teacher will be presented. *(Prerequisite: Undergraduate: PE 217 and PE 324; Graduate: PE 484 and PE 508 or consent of the instructor)*

PE 497 Seminar in the Children's Physical Development Clinic (3 crs.)

The Children's Physical Developmental Clinic (CPDC) is an interdisciplinary community service program designed to enhance the physical, motor and social development of disabled children 18 months through 21 years. This course affords veteran student clinicians the challenge of assisting with program development, administration and evaluation of the CPDC as well as the training and supervision of less experienced clinicians. The course is open to all majors and may be repeated once for credit with the consent of the instructor. *(Prerequisites: A minimum of one year experience in the Children's Physical Developmental Clinic and consent of the instructor)*

PE 498 Field Experience in Physical Education (3-15 crs.)

A field experience offers qualified students the opportunity to gain practical experience in their major. Placements are made in both public and private agencies and are designed to complement a student's concentration in their major. *(Prerequisite: consent of the department; formal application required) Either semester*

PE 499 Directed Study in Physical Education (1-3 crs.)

Open to all juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. *(Prerequisite: consent of the department; formal application required) Either semester*

Movement Arts, Health Promotion, and Leisure Studies

Other Approved Courses:

PE 200 Fitness for Life
 PE 260 Youth Sports
 PE 300 Movement Acquisition for the Pre-School Child
 PE/CT 321 Creative Dance for Children
 PE 328 Movement in the Creative Arts
 PE 415 Methods and Techniques in Coaching Baseball
 PE 416 Methods and Techniques in Coaching Basketball
 PE 417 Methods and Techniques in Coaching Football
 PE 418 Methods and Techniques in Coaching Field Hockey
 PE 419 Methods and Techniques in Coaching Volleyball
 PE 420 Methods and Techniques in Coaching Lacrosse
 PE 421 Methods and Techniques in Coaching Soccer
 PE 422 Methods and Techniques in Coaching Track and Field
 PE 423 Methods and Techniques in Coaching Swimming
 PE 424 Methods and Techniques in Coaching Wrestling
 PE 425 Officiating Baseball
 PE 426 Officiating Basketball
 PE 427 Officiating Football
 PE 428 Officiating Soccer
 PE 429 Officiating Field Hockey
 PE 431 Officiating Volleyball
 PE 432 Officiating Lacrosse
 PE 439 Analysis and Application of Teacher Behavior
 PE 440 Scientific Basis of Coaching
 PE 448 Man and Movement: Humanistic Perspectives in Sport and Physical Education
 PE 466 Play Space Design
 PE 471 Psycho/Social Aspects of Sports
 PE 479 Problems in Physical Education and Athletics
 PE 482 Public Relations in Physical Education
 PE 485 Integration of Physical Activity: Home, School and Community
 PE 487 Psychological Aspects of Coaching

PE 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

PE 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

PE 504 Nutrition for Sports, Exercise and Weight Control (3 crs.)

This course will provide a thorough review of nutritional principles and practices essential for exercise and optimal performance in sports. Also stressed are principles and strategies for maintaining, gaining or losing weight.

PE 505 Principles and Techniques of Supervising Student Teachers in Physical Education (3 crs.)

A course designed to provide physical education teachers with knowledge of supervision, the role of the cooperating teachers and their impact on student teachers, methods for observing and recording teaching behaviors and suggestions for helping student teachers implement instructional strategies. Theoretical and practical experience will be provided. (*Prerequisite: Public School Teaching*)

PE 506 Philosophy and Principles of Physical Education (3 crs.)

Philosophical inquiry into the discipline of physical education including a study of trends and forces in education as they affect the field. (*Prerequisite: six credits in Physical Education*)

PE 507 The Child and His Movement Behavior (3 crs.)

Current concepts and trends related to movement experiences of children with emphasis on developmental movement, and learning. (*Prerequisite: twelve credits in Physical Education or consent of the instructor*)

PE 508 Motor Learning (3 crs.)

Integration of biological and psychological concepts in the acquisition of motor skills including environmental conditions, developmental factors and learning theories. (*Prerequisite: three credits in Psychology*)

PE 509 Drugs in Sports (3 crs.)

This course is designed for coaches and others who are interested in the study of Ergogenic Aids and "recreational" drugs in sport. Information will be presented to correct widespread misconceptions about the use of ergogenic aids and other drugs to maximize athletic performance. Emphasis will be on the physiological, psychological and pharmacological effects of ergogenic aids and on developing skills to identify and help athletes who display addictive behaviors.

PE 510 Concepts of Curriculum Development (3 crs.)

Current educational trends, theories relative to physical education and the development of curricular models, with a focus on the needs of today's society. (*Prerequisite: nine credits in Physical Education or consent of the instructor*)

PE 511 Research Methods in Physical Education (3 crs.)

This course will develop competencies needed to both produce and consume research in Physical Education and allied areas. In the development of a research proposal, students will gain an understanding of such research techniques as problem formulation, literature review, sampling, hypothesis construction, research design, instrumentation, and data analysis.

PE 512 Administration of Physical Education (3 crs.)

Application of administrative principles to the physical education program. (*Prerequisite: 12 credits in Physical Education or consent of the instructor*)

PE 513 Educational Games for Elementary and Middle School Level (3 crs.)

A comprehensive study of the movement approach to educational games with emphasis on analysis of games. Progression utilizing thematic approach and curriculum development will also be presented.

PE 514 Improving Teaching Effectiveness in Physical Education (3 crs.)

The course will focus on research pertaining to teacher and school effectiveness and implications for teaching physical education. Formats through which teachers can gather data for use in self analysis and improvement of instruction will be examined. Equity issues and the need of a multicultural society will also be discussed. (*Prerequisite: PE 412 or equivalent*)

School of Education

PE 515 Advances in Exercise Circulation (3 crs.)

This course provides students with a knowledge and understanding of current theories explaining the responses of the circulation to acute and chronic exercise. It considers translocations of fluids and fluid constituents within the vascular systems and among various body compartments. It also considers potential growth responses and abnormal responses. (*Prerequisite: PE 401*)

PE 516 Exercise Electrocardiography (3 crs.)

This course focuses on the basic electrophysiology of the heart and the intricate electrical responses of the hearts of healthy and unhealthy individuals to exercise. Its primary emphases are thus exact descriptions of ECG variations, mechanisms underlying these variations and factors influencing cardiac electrophysiology.

PE 517 Experimental Processes in Physical Education (3 crs.)

This course will develop quantitative competencies required to conduct and understand experimental research typically occurring in physical education. It thus concerns basic measurement theory, probability, description and inference.

PE 520 Health Fitness Program Planning and Management (3 crs.)

Designed to address strategies essential to the development of successful exercise and health fitness programs. Emphasis will be placed on program development, motivational techniques and administrative considerations. (*Prerequisite: At least one course in exercise physiology or consent of the instructor*)

PE 521 Child's Play--A Learning Medium (3 crs.)

Provides a vehicle for discovering the relationship between the developing pre-school child and the world of play. Adults involved with children in any capacity will become familiar with the contributions of play to the child's mastery of self and the environment. The effect of play on psychomotor, affective and cognitive development will be considered.

PE 522 Sports Programs for the Child Athlete (3 crs.)

The focus of this course will be on the social, psychological and physical impact of sport and competition on the child athlete. At the conclusion of the course, participants will be able to design a model sports program for young children.

PE/MG 525 Time Management for Coaches (2 crs.)

This course will help coaches to successfully manage the professional and personal time demands they face. Students will examine their current time management effectiveness, will be provided with an overview of time management in theory and application, and will be given suggestions for developing their own time management system.

PE 526 Sport Law (3 crs.)

This course will give the sports professional an understanding of the legal system as a whole and the unique legal problems and responsibility faced in managing a sports activity. The sports professional will be educated to identify potential legal liability, to avoid unnecessary legal risks and to minimize legal loss exposure.

PE 527 Effective Coaching of Sports Skills (3 crs.)

This course is designed to improve the coach in his role as a teacher of sports skills. It emphasizes the theoretical and practical aspects of planning, delivering and evaluating a season of skill instruction.

PE 528 Classroom Management for Student Achievement in Physical Education (2 crs.)

Proactive approaches for creating effective learning in movement environments in a multicultural society will be discussed. Topics will include the pygmalion effect, the components of a systematic approach to classroom management, planning classroom rules and procedures, and techniques for implementing and maintaining a management system. Various management models, techniques and strategies practiced by distinctive teachers will be highlighted along with behavior management and social competency skills appropriate for a movement oriented learning environment. (*Prerequisites: PE 412 or equivalent*)

PE 529 Movement Skill Development (2 crs.)

This course addresses motor development as a continuous developmental process. Emphasis will be placed on competencies that include the ability to formulate a developmental perspective; knowledge of changing motor behaviors; assessment; knowledge of factors affecting motor development, including physical growth and physiological change, and interventions; and the ability to apply motor development knowledge.

PE 530 The Motor Domain: Implications for Chronic Disabilities (2 crs.)

An indepth study of etiologies, classifications and functional motor abilities of chronic medical conditions will be presented. Topics will include asthma, cystic fibrosis, epilepsy, cancer, obesity, diabetes, arthritis, multiple sclerosis and muscular dystrophy. The course will also emphasize unique physiological, psychological and biochemical characteristics pertaining to motor development, sport and leisure. (*Prerequisites: PE 324 or equivalent*)

PE 531 Motor Performance Adaptations for Moderate and Severe Disabilities (2 crs.)

This course addresses the etiologies, prevalence, characteristics and functional motor abilities of moderate and severe disabilities. Attention is given to an overview of moderate and severe populations, spinal cord injured and amputees. The course will also address such related topics as bloodborn pathogens, screening and assessment methods, related professional services, leisure placement strategies, due process, advocacy, and legal considerations. (*Prerequisite: PE 560*)

PE 532 Applied Kinesiology in Sport and Dance (2 crs.)

Indepth analysis of sport skills and dance movements with anatomical and mechanical principles for improvement of performance, including the analyzation from rudimentary skill level to the advanced level in selected areas. (*Prerequisites: PE 220 or equivalent*)

PE 533 Applications of Exercise Physiology (2 crs.)

Emphasis will be placed on the strategies utilized to develop physiological capacities underlying motor skills as well as the physiological variations induced by these stimuli. The course will necessarily concern cardiovascular endurance, strength, muscular

Movement Arts, Health Promotion, and Leisure Studies

endurance, flexibility and body composition from the perspective of physiology. *(Prerequisite: PE 401)*

PE 540 Sports Injuries: Prevention and Care (3 crs.)

An introduction into the theories and principles surrounding the care and prevention of athletic injuries. Classroom study will include pre-season conditioning programs, protective equipment, acute emergency injury and illness care and prophylactic techniques.

PE 544 Applied Laboratory Techniques in Exercise Science (3 crs.)

Students will utilize a number of laboratory techniques to assess fitness capabilities and health status of normal subjects. Focus will be on standardization of procedures and collection of reliable and valid data. An additional concern will be clear representation and interpretation of classical techniques used to routinely assess physical fitness in the laboratory.

PE 545 Physical Conditioning and Training in Sports and Exercise (3 crs.)

This course is designed to provide the sport practitioner, i.e., the coach, athlete, team trainer, and physical educator, with a basic understanding of the physiologic principles underlying the physical conditioning process. Methods of planning, implementing and evaluating training programs will be the main focus of attention. *(Prerequisite: introductory course in exercise physiology or consent of the instructor)*

PE 546 Biomechanics of Sport (3 crs.)

This course provides students with a knowledge and understanding of the mechanical concepts underlying performance of motor skills. Focus is on analytic techniques which allow students to analyze skills and effectively consume complex skill analyses conducted by others.

PE 550 Sports Medicine for the Athletic Woman (3 crs.)

This course will focus on today's athletic woman and will include current concepts of conditioning programs, management of athletic injuries/conditions relevant to women in sports.

PE 595 Internship in Physical Education (1-6 crs.)

An internship offers qualified students the opportunity to gain substantial practical experience within their major. Placements are designed to complement a student's program concentration. *(Prerequisite: 12 graduate credits of physical education and consent of adviser)*

Physical Education Activity Courses

Physical Education Activity courses are offered on a quarter or semester basis for the following credit: 1.0 credit for a three-hour quarter course; 2.0 credits for a three-hour semester course. A maximum of six credit hours in physical education courses may be used toward graduation (this does not apply to physical education majors).

PE 131 Volleyball I--Beginner

Concepts and fundamental skills of volleyball, team play, rules and game strategy. *Either semester*

PE 132 Field Hockey I

Development of basic skills, concepts and strategies for playing the game with understanding and application of rules. *Fall semester*

PE 133 Basketball--Beginner

Fundamental skills of basketball, elementary offense and defense strategies. *Either semester*

PE 140 Women's Lacrosse

Fundamental skills, strategies, rules and knowledge for playing the women's game. *Spring semester*

PE 141 Soccer

Fundamental skills of soccer including: kicking techniques, trapping, heading, offensive and defensive strategy and rules of the game. *Either semester*

PE 145 Flag Football

Concepts and fundamental skills of the game including rules and strategy of play. *Either semester*

PE 150 Beginner Swimming

Basic aquatic orientation. Emphasis on developing basic swimming strokes, survival floating for the shallow water swimmer. *Either semester*

PE 152 Lifeguard Training

Emphasis is on requirements and responsibilities of lifeguarding, training, rescue techniques, search and recovery, environmental conditions, swimming pool chemistry, maintenance and operation.

PE 153 Jazz Dance

This course provides experiences with a variety of jazz styles, including lyric and percussive. Emphasis is on performance of choreographed routines and mastery of isolations and syncopations. *Either semester*

PE 154 Ballet

This semester course is aimed at the mastery of basic ballet technique including work at the barre, center adagio and allegro, and across the floor combinations.

PE 157 Movement and Relaxation I

Theories and techniques of Yoga and relaxation, and basic movement related to daily activities.

School of Education

PE 161 Folk Dance

Folk dance terminology, formations, and dance steps. Course will include insight into the background and customs of the people in the countries where the dances originated. *Either semester*

PE 162 Creative Modern Dance I

This course is an introduction to the creative and technical elements of modern dance. There will be explorations of body movements in time through space with force. *Either semester*

PE 163 Aerobics

A series of easy to learn dances that combine the health and figure benefits of jogging with the fun and vigor of dancing. It is recommended that participants should be in good physical condition and anyone over 35 years have a physical examination prior to enrolling in the class. *Either semester*

PE 164 Square Dance

An introduction to the contemporary square dance. *Either semester*

PE 166 African Dance

This course will introduce students to the dance styles of Africa and the Caribbean using the Dunham techniques as its technical base. There will be discussion of the cultural history of African and Caribbean styles and their effect on American dance.

PE 167 Street Dance

This course will deal with the basic technique of street dance from electric boogie to hip hop and electric slide. Students will be encouraged to share from their own dance background.

PE 168 Ballroom Dance

This course will introduce students to the basic steps, rhythms and timing and performance. Dances covered will include the waltz, fox trot, swing, polka, and a sampler of Latin dances.

PE 170 Bowling I--Beginner

Concepts and fundamentals of bowling: approach, delivery, follow through, and strategy of play. \$4.50 per week fee, approximately. *Either semester*

PE 173 Archery I--Beginner

Concepts and fundamental skills of archery including methods of aiming, scoring, and introduction to novelty events. *Either semester*

PE 174 Tennis I--Beginner

Concepts and fundamental skills of tennis including forehand, backhand, serve, rules and strategy of singles and doubles play. *Either semester*

PE 175 Golf I--Beginner

Concepts and fundamental skills of the game including rules and scoring. A minimal fee of approximately \$3.00 for use of facilities will be charged. *Either semester*

PE 176 Badminton I--Beginner

Fundamental skills, rules and game concepts in order to prepare students for satisfying play experiences. *Either semester*

PE 186 Track & Field

Skills of track and field including running, jumping, throwing events, and their progressions. *Either semester*

PE 188 Jogging and Road Running

An introduction to jogging and road running. Emphasis on knowledge and application of training technique and running mechanics, as they apply to the spectrum of running from jogging to road racing and marathoning. *Alternate years*

PE 190 Conditioning

Concepts, exercises and activities related to the development of physical fitness, including isometrics, weights and running. *Either semester*

PE 193 Weight Training

Emphasis will be on concepts and development of physical fitness through individualized weight training programs. *Alternate years*

PE 194 Wrestling

Fundamentals of college wrestling with emphasis on mat skills, rules, scoring and strategy.

PE 196 Fencing I--Beginner

Concepts and fundamental skills of fencing including defense, feints, lunges, parries, ripostes, and disengages.

PE 202 Orienteering

Development of skills in the use of maps and compass as related to the sport of orienteering.

PE 203 Basic Rock Climbing

Development of fundamental skills and techniques used in rock climbing with special attention to belaying and safety considerations.

PE 231 Volleyball II--Intermediate

A follow-up of Volleyball I with emphasis on increased proficiency of performance and game strategy. (*Prerequisite: PE 131 or comparable experience*)

PE 233 Basketball II--Intermediate

A follow-up of Basketball I with emphasis on advanced strategy and game play. (*Prerequisite: PE 133 or comparable experience*)

PE 235 Rhythmic Activities: Programming For All Ages

Designed to provide a basic understanding of rhythmical movements and their application for programming for all age groups. The course will include a variety of expressive locomotor, non-locomotor and manipulative movements. *Offered once per year.*

PE 243 Ballet II

This course is a continuation of work begun in Ballet I. Ballet technique will be learned at the barre, in center adagio and allegro combinations and in traveling across the floor. (*Prerequisite: PE 154 or previous experience in ballet*)

PE 244 Baseball/Softball

Concepts and fundamental skills of the games including rules and strategy of play. *Spring semester*

Movement Arts, Health Promotion, and Leisure Studies

PE 250 Intermediate Swimming

Continued emphasis on developing basic swimming skills, strokes, diving, survival techniques. This course is for the deep water swimmer. (Prerequisite: PE 150 or comparable experience) Either semester

PE 253 Jazz II

The class is a second level of jazz dance which takes the basics and expands on them through dance combinations and locomotor patterns. (Prerequisite: PE 153 or previous jazz dance experience)

PE 254 Water Polo

Includes basic movements, skills, and maneuvers of the sport of water polo with emphasis on offensive and defensive fundamentals and strategies, practical drills, rules, and regulations. Offered once per year

PE 258 Modern Dance Technique

The course will deal with the performance of modern dance technique through the study of styles of various modern dance artists.

PE 262 Modern Dance II

The course is a continuation of the creative and technical performance of modern dance. Greater emphasis will be placed on individual and group compositions and improvisations.

PE 270 Bowling II--Intermediate

A follow-up of Bowling I with emphasis on increased skill and consistency. \$4.50 per week fee, approximately. (Prerequisite: PE 170 or comparable experience)

PE 274 Tennis II--Intermediate

A follow-up of Tennis I with emphasis on volley, lob, smash, and game strategy. (Prerequisite: PE 174 or comparable experience)

PE 276 Badminton II--Intermediate

A follow-up of Badminton I with emphasis on advanced skills, singles and doubles play, and game strategy. (Prerequisite: PE 176 or comparable experience)

PE 278 Bicycle Touring

An understanding and appreciation for the sport of cycling through the application of body mechanics, cycling techniques, knowledge of multigeared bikes and the many aspects of touring. Students must have a 10-speed bike.

PE 280 New Games

This course is designed to introduce the philosophy of new games and develop a repertoire of non-competitive, cooperative and collaborative games suitable for a variety of age groups. The students will experience the psychomotor and affective components embodied in the new games concept. Offered once per year.

PE 285 Gymnastics

Concepts and fundamental skills of vaulting, balance beam, parallel bars, uneven parallel bars, high bar, side horse, rings and free exercise. Either semester

PE 350 Advanced Swimming

Emphasis on developing high level of aquatic skill through instruction in advanced strokes, springboard diving, swimming turns, and survival techniques. Specialized aquatic activities may be offered. (Prerequisite: PE 250 or comparable experience)

PE 354 Scuba Diving

The fundamentals of skin and scuba diving. Emphasis on safety using the self contained underwater breathing apparatus. (Prerequisite: PE 250 or comparable experience, physical examination)

PE 356 Canoeing I

Instruction in fundamental skills of canoeing, and small craft safety techniques.

Other Approved Courses:

PE 134 Self Defense

PE 160 Survey of Dance

PE 182 Ski Touring

PE 189 Skiing I -- Beginner

PE 260 Youth Sports

PE 232 Field Hockey II

PE 275 Golf II -- Intermediate

PE 355 Synchronized Swimming

PE 364 Square Dance Calling



Department of Secondary Education and Professional Programs

High School Education Middle School Education Counseling Educational Leadership and Administration Instructional Media/Library Science

Faculty

<i>Chairperson:</i>	Associate Professor David Englund
<i>Professors:</i>	Robert Mogilnicki, Charles Robinson
<i>Associate Professors:</i>	Leo McGuirk, Joanne Newcombe, Maxine Rawlins, Raymond ZuWallack
<i>Assistant Professors:</i>	Thomas Lee, Richard Neubauer

Undergraduate Programs

High School Education

The Department of Secondary Education and Professional Programs provides students with the theoretical and practical knowledge necessary for becoming effective teachers. The curriculum includes a detailed consideration of contrasting modes and strategies of teaching and of the psychological theories and philosophical reasons justifying their appropriateness. Theory is related to practice by means of microteaching, role-playing, other simulation activities and teaching in area schools. Students gain additional practical experience through tutoring, assisting or observing teachers, and student teaching at the appropriate level in area schools.

All undergraduate students seeking professional certification must consult the section of this catalog entitled *School of Education* for information pertaining to changes in the *State Regulations for the Certification of*

Educational Personnel and important institutional deadlines.

All students in a teacher education program must apply for admission to, and be accepted in, a professional education program. All undergraduate students seeking professional certification must consult the section of this catalog entitled *School of Education* for information pertaining to changes in the *State Regulations for the Certification of Educational Personnel* and important institutional deadlines.

Middle School Education

The Department of Secondary Education and Professional Programs offers specific sequences of courses for students who wish to prepare themselves for teaching at the middle school level (grades 5-9). Details of these middle school level programs are available from the department office. Until the programs have been approved by the Massachusetts Department of Education, however, students who complete one of the middle school options must apply directly to the state for certification through the individual transcript process. Information about this process is available from the School of Education office.

Secondary Education and Professional Programs

Instructional Media Minor

ME 310 Introduction to Instructional Media
 AR 216 Basic Photography
 ME 456 Radio and TV Production I
 ME 460 Graphics for Designing Media
 Six (6) additional credits in instructional media (with program approval)

Radio and Television Operation and Production Minor

For detailed information on this minor, see the catalog section entitled *Multidisciplinary and Pre-Professional Programs*.

High School Education Minor

The department offers a minor in high school education. A student selecting this minor must in addition select a major in an appropriate academic discipline. The major requirements for each academic discipline, including cognates and the high school education minor, are described on following pages.

All students in a teacher education program must apply for admission to, and be accepted in, the teacher education program. All undergraduate students seeking professional certification must consult the section of this catalog entitled *School of Education* for information pertaining to changes in the *State Regulations for the Certification of Educational Personnel* and important institutional deadlines.

The high school education minor is designed for students desiring to qualify for one of the following specialized teaching certificates:

Teacher of Visual Art	Gr. 5-12
Teacher of Biology	Gr. 9-12
Teacher of Chemistry	Gr. 9-12
Teacher of Earth Sciences	Gr. 9-12
Teacher of English	Gr. 9-12
Teacher of French	Gr. 5-12
Teacher of History	Gr. 9-12
Teacher of Mathematics	Gr. 9-12
Teacher of Physics	Gr. 9-12
Teacher of Social Studies	Gr. 9-12
Teacher of Spanish	Gr. 5-12

In addition to majoring in an appropriate academic discipline (see below, *Major Requirements for Education*

Minors), the student also completes the high school education minor.

High School Education Minor:

ED 220 Teaching in the High School
 ED 230 Educational Psychology
 ED 240 Classroom Management in the High School
 ED 360 Aims and Philosophy of High School Education
 ED 370 Evaluating Teaching and Learning in the High School

An appropriate course from the group

ED 412-430 Strategies for Teaching in the High School
 ED 490 Student Teaching Practicum--High School

Major Requirements for Education Minors

Students desiring to complete a minor in high school education must also complete an academic major. Appropriate academic majors, along with major and cognate requirements, are listed below. It is important to note that in many cases the major or cognate requirements for students selecting an education minor are somewhat different from those that hold for students who do not minor in education.

Art (Teacher of Visual Art 5-12)

Major courses:

AH 201 Art Survey: Prehistoric, Ancient and Medieval
 AH 202 Art Survey: Renaissance, Baroque and Modern
 AH 307 20th Century Art and Architecture
 AR 125 Drawing I
 AR 130 Two-Dimensional Design
 AR 140 Three-Dimensional Design
 AR 216 Basic Photography
 AR 225 Drawing II
 AR 230 Painting I
 AR 240 Sculpture I
 AR 255 Printmaking I
 AR 260 Introduction to Graphic Design
 AR 270 Ceramics

Cognate course:

PL 325 Philosophy of Art

School of Education

Biology (Teacher of Biology 9-12)

Major courses:

BI 100 General Principles of Biology
 BI 104 Animal Morphology
 BI 118 Evolution
 or
 BI 422 Biological Evolution
 BI 200 Cell Biology
 BI 240 Plant Morphology
 BI 282 Comparative Chordate Anatomy
 or
 BI 284 Invertebrate Zoology
 BI 321 Genetics
 BI 341 Plant Physiology
 BI 373 Animal Physiology
 BI 425 Ecology
 BI 428 Microbiology

Cognate courses:

CH 131-132 General Chemistry I-II
 ES 100 Physical Geology
 PH 181-182 Elements of Physics I-II
 MA 141 Elements of Calculus I
 Plus an additional course in calculus (MA 142), statistics
 or computer science.

Chemistry (Teacher of Chemistry 9-12)

Major courses:

CH 100 Computer Science in Chemistry
 or
 CS 101 Computer Science I
 CH 131-132 General Chemistry I-II
 or
 CH 141-142 Chemical Principles I-II
 CH 241 Inorganic Quantitative Analysis
 CH 242 Intermediate Inorganic Chemistry
 CH 343-344 Organic Chemistry I-II
 CH 381-382 Physical Chemistry I-II
 CH 450 Instrumental Analysis

Cognate courses:

MA 151-152 Calculus I-II
 or
 MA 141-142 Elements of Calculus I-II
 PH 243-244 General Physics I-II
 or
 PH 181-182 Elements of Physics I-II
 Plus one year of a foreign language

Theatre Arts Concentration (Teacher of Drama 5-12) (approval pending)

Major courses:

CT 211 Voice Production for Theatre
 or
 CC 210 Voice and Diction
 CT 115 Play Production
 CT 220 Play Analysis for Production
 CT 242 Acting I (formerly 390)
 CT 272 Stagecraft
 CT 421 Theatre History I
 CT 422 Theatre History II
 CT 431 Directing I
 CT 495 Seminar in Contemporary Theatre
 CT 140, 170, and 185 Theatre Practicum*

Additional course required for state certification
 CC 250 Public Speaking
 CC 290 Language Acquisition and Development

One elective from:

CT 156 Movement and Dance for Actors
 CT 210 Oral Interpretation
 CT 226 Children's Theatre (formerly 420)
 CT 230 Creative Dramatics
 CT 241 Improvisational Acting

*Theatre majors are required to take four practicum
 hours over eight semesters: only one hour per semester
 can be earned and only six such hours counted toward
 graduation.

Cognate course:

One course must be selected from the following:
 EN 241 Shakespeare
 EN 353 Modern European Drama
 EN 356 Modern American Drama

Earth Sciences (Teacher of Earth Science 9-12)

Major courses:

ES 100 Physical Geology
 ES 101 Historical Geology
 ES 284 Geomorphology
 ES 301 Solar System Astronomy
 ES 306 Physical Oceanography
 GE 203 Meteorology
 ES 372 Mineralogy
 ES 463 Petrology
 ES 496 Seminar in Geology
 Plus nine additional semester hours of approved earth
 sciences electives

Secondary Education and Professional Programs

Cognate courses:

MA 151-152 Calculus I-II

or

MA 141-142 Elements of Calculus I-II

CH 131-132 General Chemistry I-II

or

CH 141-142 Chemical Principles I-II

One year of Physics or Biology

Proficiency in a foreign language at the intermediate level

English (Teacher of English 9-12)

Major courses:

EN 101 Writing I

EN 102 Writing II

EN 203 Writing About Literature

EN 211 Literary Classics of Western Civilization to 1600

or

EN 221 Major British Writers to 1800

EN 301 Writing and the Teaching of Writing

EN 305 History of the English Language

or

EN 323 Introduction to Linguistics

One English literature course before 1800

One English literature course after 1800

One American literature course

One advanced Shakespeare course

One writing course above the freshman level

Plus four English electives.

One world literature course

One literature seminar

French (Teacher of French 5-12)

Core Requirements:

LF 151 Intermediate French

LF 252 Reading in French

LF 271 Patterns of the French Language

LF 272 Advanced French Composition

LF 281 French Civilization I

LF 282 French Civilization II

LF 411 Survey of French Literature III

LF 412 Seminar in French Literature

LF 471 Extemporaneous Use of French

Electives:

LF 311 Survey of French Literature I

LF 312 Survey of French Literature II

LF 371 Advanced French Composition

Students pursuing student teaching and certification in French may not substitute ED 440 for ED 424. FL 324 is prerequisite to ED 424.

History (Teacher of History 9-12)

Required courses:

HI 111 Western Civilization to 1715

or

HI 121 The Ancient World

HI 112 Western Civilization since 1715

or

HI 124 The World since 1815

HI 221 U.S. History and Constitutions to 1865

HI 222 U.S. History and Constitutions since 1865

One 300-400 level course from each of the following areas:

Area III Ancient-Medieval

Area IV Early Modern-Modern

Area V Non-US, Non-Western, National Histories

Area VI U.S. History to 1877

Area VII U.S. History since 1877

Area VIII U.S. History-Topical

Only six hours of 100 level and six hours of 200 level courses may be applied toward a history major or minor.

No more than three hours from the following may be used toward the 30 hours for a history major: HI 492, 498, 499.

History (Teacher of Social Studies 9-12)

Required courses:

HI 111 Western Civilization to 1715

or

HI 121 The Ancient World

HI 112 Western Civilization since 1715

or

HI 124 The World since 1815

HI 221 U.S. History and Constitutions to 1865

HI 222 U.S. History and Constitutions since 1865

School of Education

One course from each of the following areas:

- Area III Ancient-Medieval
- Area IV Early Modern-Modern
- Area V Non-US, Non-Western, National Histories
- Area VI U.S. History to 1877
- Area VII U.S. History since 1877
- Area VIII U.S. History-Topical

Cognate Courses:

Political Science - six hours

- PO 172 American Government: The Federal System
- PO 277 American Government: State and Local Government
- PO 260 International Relations

Economics - three hours

- EC 102 Principles of Macroeconomics

Geography - six hours

- GS 110 Human Geography
- and
- any regional geography

Sociology/Anthropology - six hours

- SO 102 Introduction to Sociology
- and either
- AN 100 Introduction to Cultural Anthropology
- or
- AN/SO 104 Global Human Issues

Philosophy - three hours

Eighteen of these hours (six in history, three in political science-economics-or geography, three in sociology, three in anthropology, and three in philosophy) are double-counted as part of the GER's. Thirty-six credits (twenty-four in history, twelve in social sciences) are in addition to the GER's.

Only six hours of 100 level and six hours of 200 level courses may be applied toward a history major or minor.

No more than three hours from the following may be used toward the 30 hours required for a history major: HI 492, 498, 499.

Mathematics (Teacher of Mathematics 9-12)

Major courses:

- CS 101 Computer Science I
- MA 151-152 Calculus I-II
- MA 201 Calculus III

MA 202 Linear Algebra

MA 301 Abstract Algebra

MA 401 Introduction to Analysis I

MA 403 Probability Theory

Four electives from any 300-400 level courses except MA 318

Cognate courses:

PH 243-244 General Physics I-II

Plus one year of a foreign language

Physics (Teacher of Physics 9-12)

Major courses:

PH 243-244 General Physics I-II

PH 375 Wave Theory

or

PH 385 Optics

PH 387 Modern Physics

PH 388 Electricity and Magnetism

PH 392 Digital Electronics

PH 403 Mathematical Physics

Cognate courses:

MA 151-152 Calculus I-II

MA 201 Calculus III

MA 316 Differential Equations

CH 141-142 Chemical Principles I-II

Spanish (Teacher of Spanish 5-12)

Core Requirement:

LS 252 Reading in Spanish

LS 272 Spanish Composition

LS 281 Spanish Conversation and Phonetics

LS 291 Spanish Civilization

LS 292 Spanish-American Civilization

LS 311 Survey of Spanish Literature

LS 312 Topics in Spanish Literature

LS 421 Survey of Spanish-American Literature

LS 422 Topics in Spanish-American Literature

Electives:

LS 151 Intermediate Spanish

LS 371 Extemporaneous Use of Spanish

LS 490 Seminar in Hispanic Literature

Students pursuing student teaching and certification in Spanish may not substitute ED 440 for ED 424. FL 324 is prerequisite to ED 424.

Secondary Education and Professional Programs

Graduate Programs

The Department of Secondary Education and Professional Programs offers the degree of Master of Arts in Teaching (M.A.T.) in conjunction with several of the academic departments of the college. This degree program is designed for in-service high school teachers, as well as for liberal arts graduates who wish to be certified to teach at the high school level.

In addition, the department offers the degree of Master of Education (M.Ed.) in several areas of study: counseling, educational leadership, instructional media, and school librarianship.

Students who have already earned an appropriate master's degree may focus on one or more of these areas of study as part of a Certificate of Advanced Graduate Study (CAGS) in Education program; for details consult the "CAGS in Education" description in this catalog.

Master of Arts in Teaching High School Teacher Certification Program (Grades 9-12)

The Master of Arts in Teaching (M.A.T.) certification program is designed for liberal arts graduates who wish to qualify for one of the specialized teaching certificates listed below. It may be necessary to close admission to certain M.A.T. areas of study leading to certification because of difficulties in offering advanced courses. For current information regarding this matter, students should contact the chairperson of the appropriate academic department or the Graduate School.

Graduate students must complete this certification program by August 1994, in order to be eligible for institutional endorsement by Bridgewater State College. Graduate students seeking professional certification should consult the section of this catalog entitled *School of Education* for information pertaining to changes in the *State Regulations for the Certification of Educational Personnel* and important institutional deadlines.

IMPORTANT: Students who will not complete the program by August, 1994, must meet with their adviser and plan an appropriate program that will lead to provisional and full certification. The adviser has specific course sequences to assist you in completing the program.

Certificates are offered in the following areas and levels:

Teacher of Art	Gr. 5-12
Teacher of Biology	Gr. 9-12
Teacher of Chemistry	Gr. 9-12
Teacher of Earth Sciences	Gr. 9-12
Teacher of English	Gr. 9-12
Teacher of French	Gr. 9-12
Teacher of History	Gr. 9-12
Teacher of Mathematics	Gr. 9-12
Teacher of Physics	Gr. 9-12
Teacher of Social Studies	Gr. 9-12
Teacher of Spanish	Gr. 9-12

Upon acceptance to the program, all students must enroll under the direction of their graduate adviser in GP 501 Graduate Program Planning (1 credit). Specific certification course requirements may be waived by the college if the student's documented request is approved under state approved procedures:

Phase I

Required Prerequisites

- A. ED 220 Teaching in the High School*
ED 240 Classroom Management in the High School*
ED 370 Evaluating Teaching/Learning in the High School
ED 440 Methods and Materials in Secondary Education*
or
An appropriate Strategies for Teaching in the High School course from the group ED 412-430. (Note: ED 440 may not be used as a substitute for ED 424 in foreign language programs or for ED 425 in art programs.)
- B. The equivalent of an undergraduate major at Bridgewater State College in the intended area of certification, subject to review by the appropriate academic department.

*Requires a 20-hour field experience in an area high school.

School of Education

Phase II

A. Required Graduate Courses

GC 500 Research and Evaluation
SE 510 Exceptional Children in the Schools*
ED 520 Psychological Foundations of Education
ED 480 Philosophy of Education
or
ED 580 Philosophical Foundations of Education

B. A minimum of 18 graduate credits in the intended area of certification, to be determined in consultation with the appropriate academic department (program adviser).

*Requires a 20-hour field experience in an area high school.

Phase III

Practicum/Internship

Students may not enroll in any of the following courses until all requirements in Phases I and II have been completed.

ED 490 Student Teaching Practicum--High School
(6 or 12 credits**)

or
ED 590 Practicum--High School (12 credits**)

or
ED 591 Internship--High School (6 credits)

**The high school practicum is usually one semester in length (12 credits). Students with full-time teaching experience of 16 consecutive weeks or more in the same classroom need only 6 credits (8 weeks). Students must document prior teaching experience and apply for a college waiver for one-half of the practicum.

Phase IV

Comprehensive Examination

Students must pass a comprehensive examination in the area of certification in order to be eligible to receive the M.A.T. degree.

Master of Arts in Teaching Program for Certified Teachers

The Master of Arts in Teaching (M.A.T.) degree requirements for in-service high school teachers include a minimum of 30 approved graduate credits (ordinarily 18 credits in the academic area of concentration and 12 credits in education). A thesis is optional in the program. Appropriate teaching experience and successful completion of a comprehensive examination are required. The M.A.T. program is described more fully under the heading "Graduate Degree Requirements" in the *Graduate School* section of this catalog. For advice, students not yet accepted should consult with the chairperson of the appropriate academic department and the graduate program coordinator of the secondary education and professional programs department.

The departmental ED offerings include the following courses which may not be taken for graduate credit: All courses at the 200 level
ED 499 Directed Study in High School Education

Counseling Programs

Program Coordinator: Dr. Maxine Rawlins

The Master of Education in Counseling (M.Ed.) and the Certificate of Advanced Graduate Study in Education with an emphasis in Counseling (CAGS) programs have been designed to provide students with advanced training and to prepare graduates for employment in a variety of settings including community mental health programs, higher education student affairs administration, and as school guidance counselors at the elementary and secondary levels. For specific information regarding the CAGS Program please consult the separate section in this catalog identified through the index.

School Guidance Counselor Certification

Requirements leading to certification as a school guidance counselor at the nursery through ninth grade level (N-9) or the fifth through twelfth grade level (5-12) are outlined below in the master's degree program description. Certification through the approved program with endorsement by the college will result in interstate

Secondary Education and Professional Programs

reciprocity with signatory states as specified under the Interstate Certification Compact. To discuss the various certification program options please consult with the program coordinator.

Candidates seeking certification must provide documentation that at least three field experiences were completed in school settings at the appropriate level for certification (i.e. N-9 or 5-12).

Certification regulations require that candidates complete a full practicum or a half practicum and an internship. However, candidates with a classroom teaching certificate and one year of employment in the role covered by that certificate may meet this requirement by completing a half practicum. While a teaching certificate is not required for admission into the program or for certification, candidates seeking school positions are urged to consider obtaining appropriate teaching credentials. Information may be obtained from the professional education office.

The current regulations pertaining to the certification of school guidance counselors as outlined in this catalog will be in effect until September 30, 1994. Any person who applies to the State Certification Bureau with a completed application, including a transcript documenting the completion of all required courses and the practicum/internship, by that date will receive a lifetime certification.

New regulations will go into effect on October 1, 1994. Questions regarding this matter should be directed to the program coordinator.

School Adjustment Counselor Certification

Students interested in seeking certification through the Department of Youth Services as school adjustment counselors will meet the social work requirement by enrolling in:

SW 330 Generalist Practice I
and
SW 335 School Social Work: History, Theory and Issues.

For additional information, please contact the program coordinator.

Licensure

After more than five years of work, the members of the Massachusetts Mental Health Counselors Association succeeded in passing a licensure bill in November, 1987. The act (House Bill 5295, Ch. 521) establishes a Board of Allied Mental Health and Human Services Professions, prescribes the membership, duties and powers of the board, provides for the issuance and revocation of licenses and fixes penalties for violations.

This legislation applies to a range of allied mental health and human services professionals including marriage and family therapists, rehabilitation counselors and mental health counselors. Specifically exempt from licensure are licensed psychologists and social workers, registered nurses, and school counselors. The counseling program is currently being revised to allow students to meet the requirements for licensure.

Individuals interested in obtaining a copy of the legislation should request Publication #: 262 CMR from the State House Book Store, State House, Room 116, Boston, MA 02133. NOTE: At the time that this catalog was compiled, the cost of the publication was \$1.50. A copy is also on file at the main desk of the Maxwell Library.

Master of Education in Counseling

The committee subscribes to the general policies of admission as outlined by the Graduate School. Candidates should be able to demonstrate through paid or non-paid experience an aptitude for counseling. In the case of certain applicants, a personal interview may be required.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. A minimum of thirty-six approved graduate credits is required in this degree program.

Students must satisfactorily complete the following curriculum. Program modifications may be made only with the approval of the adviser. In addition, students seeking certification must meet state and college guidelines for the waiver of any program requirement.

1. Research Methods and Findings: GC 500 Research and Evaluation - The research topic selected must relate to the degree program, or additional

School of Education

research-based study through GC 502 Research or GC 503 Directed Study will be required. Total: 3 credits

2. Humanistic and Behavioral Studies: GC 430 The Guidance Function in School, Agency and Community Settings, ED 520 Psychological Foundations of Education. Total: 6 credits.
3. Departmental requirements:
GC 530 Counseling Theory and Practice
or
GC 537 The Counseling Process
GC 533 Psychological Measurement
GC 535 Applied Counseling: Adolescent-Adult
or
GC 536 Applied Counseling: Pre-Adolescent
GC 538 Theory and Process of Group Interaction
GC 450 Career Counseling Strategies
or
GC 539 Career Information and Placement
Practicum or Internship
Total: 21 credits.
4. Program Electives: Courses appropriate to the degree program and the personal/career goals of the individual student. Degree candidates are urged with the approval of their adviser to consider the wide range of complementary courses offered by other departments. Total: six or more credits.

Prospective candidates who have not been formally accepted into the program are urged to confine their selection of courses to curriculum areas other than program electives. Specific assistance may be obtained from the program coordinator.

Field experiences are required of all students and must be completed prior to enrolling in the practicum or internship. Field experience sites should be selected carefully and in line with the student's career goals. The following courses include field experience components:
GC 430 The Guidance Function in School, Agency and Community Settings (N-9, 5-12)
GC 450 Career Counseling Strategies (5-12)
GC 533 Psychological Measurement (N-9, 5-12)
GC 535 Applied Counseling: Adolescent-Adult (5-12)
GC 536 Applied Counseling: Pre-adolescent (N-9)
GC 539 Career Information and Placement (N-9, 5-12)

Comprehensive examinations are administered in November and March. The examination, which requires a solid understanding of and a high level of competency in the areas emphasized by the counseling program, may not ordinarily be taken prior to the last term of course work. Previous examinations are on reserve at the main desk at the Maxwell Library.



Secondary Education and Professional Programs

Educational Leadership and Administration

Program Coordinator: Dr. Joanne Newcombe

Master of Education in School Administration

The Master of Education in School Administration program (M.Ed.) is designed to prepare students for the following positions in school administration:

- Supervisor/Director (various levels)
- Administrator of Special Education (all levels)
- Director of Guidance (all levels)
- Director of Pupil Personnel Services
- Elementary School Principal (N-6)
- Middle School Principal (5-9)
- High School Principal (9-12)
- Superintendent/Assistant Superintendent (all levels)

These programs have been approved for certification purposes by the Massachusetts Department of Education. This includes certification reciprocity with signatory states under the Interstate Certification Compact.

Please note that effective October 1, 1994, there will be changes in state regulations governing certification in this area. Students should consult with the graduate program coordinator and their adviser regarding these projected changes.

Only candidates who possess an appropriate initial certificate and who have had one year's employment under that certificate will be considered for acceptance into the program. Documentation of this must be on file with the Graduate School.

Upon completion of their program option, students seeking Massachusetts certification must possess an appropriate Massachusetts initial certificate and have had three years of employment in the role covered by that certificate.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog.

A minimum of thirty-six approved graduate credits is required in this degree program. It should be understood that those who anticipate preparing for some of the above positions, such as a superintendency, should plan to do graduate work beyond the minimum.

Applicants are required to enroll in SA 510 Seminar on Educational Leadership for the Future (SELF) prior to any review of their application material.

Students may choose one of eight program options: supervisor/director (various levels), administrator of special education (all levels), director of guidance (all levels), director of pupil personnel services (all levels), elementary school principal (N-6), middle school principal (5-9), high school principal (9-12), or superintendent/assistant superintendent (all levels). As part of their chosen program option, students must satisfactorily complete the following curriculum:

1. SA 510 Seminar on Educational Leadership for the Future (prior to admission)—3 credits.
2. Pre-practicum Requirements (including three field experiences):
 - A. Research Methods and Findings: GC 500 Research and Evaluation—3 credits
 - B. Humanistic and Behavioral Studies: ED 504 Humanistic and Behavioral Foundations of Education—3 credits.
 - C. Management and Leadership: SA 511 Educational Leadership and Managerial Effectiveness—3 credits.
 - D. Supervision, Evaluation, and Development of Personnel and Programs: SA 564 Selection and Development of Educational Personnel—3 credits.
 - E. Human Relations, Communications, and Public Relations: SA 567 Human Concerns in the Schools—3 credits.
 - F. Curriculum Design and Evaluation, and Community Education: SA 578 Curriculum Improvement—3 credits.

Elementary school principal, middle school principal, high school principal, and superintendent/assistant superintendent program options only:

- G. Fiscal Planning and Budgeting: SA 565 School Finance and Business Administration—3 credits.

School of Education

H. School Law and Labor Relations: SA 569 Legal Aspects of Educational Administration—3 credits.

Superintendent/assistant superintendent option only:

I. SA 591 Seminar in School Administration: the Superintendency—3 credits.

3. Practical Application - one of the following three courses (degree requirement for superintendent /assistant superintendent (all levels) and for other program options as indicated herein):

- SA 561 Elementary School Administration —3 credits (degree requirement for elementary school principal (N-6) program option)

- SA 563 Middle School Administration—3 credits (degree requirement for middle school principal (5-9) program option)

- SA 562 High School Administration—3 credits (degree requirement for high school principal (9-12) program option)

4. SA 568 Seminar in School Administration—3 credits.

5. Practicum or Internship (one of the following courses):

- SA 580 Practicum in Administration of Special Education, 6 credits
- SA 583 Practicum in Supervisorship/Directorship, 6 credits
- SA 584 Practicum in Elementary School Principalship, 6 credits
- SA 585 Practicum in Middle School Principalship, 6 credits
- SA 586 Practicum in High School Principalship, 6 credits
- SA 587 Practicum in Superintendency/Assistant Superintendency, 6 credits
- SA 588 Practicum in Directorship of Guidance, 6 credits
- SA 589 Practicum in Directorship of Pupil Personnel Services, 6 credits

- SA 590 Administrator of Special Education Internship, 6 credits
- SA 593 Supervisor/Director Internship, 6 credits
- SA 594 Elementary School Principal Internship, 6 credits
- SA 595 Middle School Principal Internship, 6 credits
- SA 596 High School Principal Internship, 6 credits
- SA 597 Superintendent/Assistant Superintendent Internship, 6 credits
- SA 598 Director of Guidance Internship, 6 credits
- SA 599 Director of Pupil Personnel Internship, 6 credits

Candidates for the master's degree will not be required to complete an internship or practicum if they are not seeking certification.

Upon completion of their program option, students seeking Massachusetts certification must possess an appropriate initial certificate and have had three years of employment in the role covered by that certificate. This must be documented in order to become certifiable.

M.Ed. comprehensive examinations are given by the committee during the months of November and April only. Students should consult the college calendar in this catalog for examination request deadlines.

For additional information relative to this program, students not yet accepted should consult with the coordinator of the program.

Certificate of Advanced Graduate Study (CAGS)

Graduate students who hold a master's degree in a field of education and who are seeking further study in educational leadership may pursue the Certificate of Advanced Graduate Study (CAGS) program. This program is designed to enable the student to complete an educational leadership project. The following course sequence is required in the order presented:

- ED 570 CAGS Seminar designed to address chapter one (Introduction) of the leadership project—3 credits.
- GP 501 Graduate Program Planning—1 credit.
- An appropriate advanced research course—3 credits.

Secondary Education and Professional Programs

- Course work, presently being reviewed, designed to address chapter two (Review of the Literature) and chapter three (Project Design) of the leadership project—6-9 credits.

- ED 581 CAGS Extern Program, a year-long seminar designed to address chapter four (Project Results and Evaluation) and chapter five (Summary and Recommendations) of the leadership project—6 credits.

- Program Electives, designed to meet the student's academic and professional needs—a minimum of 9-12 credits.

Media and Librarianship

Unified Media Specialist Program

Program Coordinator: Professor Richard Neubauer

This program is designed to prepare persons to meet the Massachusetts Department of Education's requirements for certification as a Unified Media Specialist (N-9, 5-12). This track may be taken in conjunction with the Master of Education in Instructional Media, Master of Education in School Librarianship, or CAGS in Education programs. It should be noted that a student who has completed all of the following requirements may apply for certification prior to completion of his or her master's degree or CAGS program. Persons are urged to contact the program coordinator to discuss the Unified Media Specialist program and obtain more detailed information.

Please note that effective October 1, 1994, there will be changes in state regulations governing certification in this area. Students should consult with the graduate program coordinator and their adviser regarding these projected changes.

IMPORTANT: Students who will not complete the program by August, 1994, must meet with their adviser and plan an appropriate program that will lead to provisional and full certification. The adviser has specific course sequences to assist you in completing the program.

Prerequisites for admission to the program:

1. Possession of a Massachusetts classroom teaching certificate.

2. Successful completion, with a grade of B or better, of ME 310 Introduction to Instructional Media and ML 300 Introduction to Unified Media Services.

As part of their program, students must satisfactorily complete the following:

1. Completion of 33 hours of course work as follows:

- AR 216 Basic Photography
- ME 310 Introduction to Instructional Media
- ME 425 Microcomputers in Library Media Centers
- ME 456 Radio and TV Production I
- or
- ME 556 Operation and Control of a Radio Station and a Television Studio
- ME 460 Graphics for Designing Media
- or
- ME 560 Graphics for Media Specialists
- ML 300 Introduction to Unified Media Services
- ML 310 Children's Literature (required for N-9 certification)
- or
- ML 320 Literature for Young Adults (required for 5-12 certification)
- ML 510 Reference and Information Sources
- ML 515 Cataloging and Classification
- ML 520 Collection Development
- ML 530 Administration of the Library Media Center

Note: All course projects and requirements must be related to the level of preparation (i.e. N-9 or 5-12 certification).

2. Completion of three different field experiences in the above course sequence prior to the beginning of the practicum. These experiences are offered in the following courses:

ME 310 Introduction to Instructional Media
ML 300 Introduction to Unified Media Services
ML 530 Administration of the Library Media Center

3. Completion of a half-semester practicum or internship judged successful on the basis of the program's standards:

ME/ML 595

Note: Persons wishing to attain unified media specialist certification at a second level must fulfill the following requirements:

1. Satisfactory completion of six (6) additional credits of

School of Education

course work selected (with the approval of the adviser) from the following:

ME 412 Communication Theory
ME 466 Cinematography
ML 453 Sharing Literature with Children
ML 559 Advanced Reference I
or
ML 560 Advanced Reference II

2. Satisfactory completion of an additional half practicum on the level for which the additional certification is being sought.

Master of Education in Instructional Media

This program is designed for present and future media specialists.

The following are program course prerequisites which may be fulfilled after admission: AR 216 Basic Photography, ED 443 Secondary School Curriculum or EE 450 Elementary School Curriculum, and EE 420 Educational Measurement. Credits earned in these courses may not be counted toward the minimum of thirty-three graduate credits required for the degree. Students who have matriculated or who plan to matriculate in the graduate program should receive program approval prior to enrolling in courses which will be used to fulfill degree requirements.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: ME 524 Seminar in Instructional Media—3 graduate credits.
2. Humanistic and Behavioral Studies: Consult Graduate Degree Requirements—Master of Education in the Graduate School section of this catalog—6 graduate credits.

3. Program Requirements:

ME 310 Introduction to Instructional Media
ME 412 Communication Theory
ME 456 Radio and TV Production I
ME 460 Graphics for Designing Media
ME 584 Administration of Media Programs
or
ML 530 Administration of the Library Media Center

Total: 15 graduate credits.

4. Program Electives: Courses appropriate to the program and approved by the adviser—9 or more graduate credits.

Information regarding unified media specialist certification is provided above. For additional information relative to this program, students not yet accepted should consult with the program coordinator.

The program offerings listed below include the following courses which may not be taken for graduate credit:

ME 498 Internship in Media and/or Librarianship
ME 499 Directed Study in Non-Print Media

Master of Education in School Librarianship

This program is designed primarily for school librarians; many of the courses, however, are of value to educators outside of the library profession.

A minimum of thirty approved graduate credits is required for this degree program. It should be noted that additional credits may be required by the program adviser, as determined by the student's library science background. The program's comprehensive examination includes both written and oral sections.

All accepted students must enroll under the direction of their adviser in GP 501 Graduate Program Planning, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: ML 590 Seminar in School Librarianship—3 graduate credits.

Secondary Education and Professional Programs

2. Humanistic and Behavioral Studies: Consult "Graduate Program Requirements—Master of Education" in the *Graduate School* section of this catalog—6 graduate credits.
3. Program Requirements:
ML 310 Children's Literature
or
ML 320 Literature for Young Adults
ML 510 Reference Information Sources
ML 515 Cataloging and Classification
ML 530 Administration of the Library
Media Center
ML 595 Professional Practicum
Total: 18 graduate credits
4. Program Electives: Courses appropriate to the degree program and approved by the adviser—6 or more graduate credits.

Admission requirements, in addition to the application information provided in the Graduate School section of this catalog, include:

Successful completion of a personal interview with the admissions committee of the department (applicants will be contacted by the department if an interview is required).

Information regarding unified media specialist certification is provided above.

Course offerings which may not be taken for graduate credit are:

ML 102 Introduction to Information Resources
ML 498 Internship in Librarianship
ML 499 Directed Study in Library Science



School of Education

Secondary Education and Professional Programs

Course Offerings*

ED 220 Teaching in the High School (3 crs.)

Introduction to teaching in contemporary high school. Developing competencies in effective, understandable and appropriate modes of communication in teaching is stressed through microteaching and other simulations. Emphasis is also placed on understanding the contemporary high school, e.g. various organizational structures, curricula, teacher roles, etc. Students gain attendant, meaningful experiences through observing, tutoring or assisting teachers in area high schools. *Either semester*

ED 221 Teaching in the Middle School I (3 crs.)

An introduction to teaching in contemporary middle school. Emphasis is placed on understanding the middle school, e.g., organizational structures, curricula, teacher roles, etc. Developing competencies in effective, understandable and appropriate modes of communication is stressed through micro-teaching and other simulations. Students gain attendant, meaningful experiences through observing, tutoring, or assisting teachers in area middle schools. *Fall semester.*

ED 222 Teaching in the Middle School II (3 crs.)

A continuation of ED 221. Emphasis is placed on further developing an understanding of the middle school and on competencies in effective, understandable and appropriate modes of communication in the classroom. *(Prerequisite: ED 221) Spring semester*

ED 230 Educational Psychology (3 crs.)

Designed to assist prospective teachers to better conceptualize education from a psychological point of view, the course examines two complementary thrusts in psychology as they relate to the teaching-learning enterprise: (1) developmental psychology and (2) the psychology of individual differences. Emphasis is placed upon understanding the intellectual, emotional, social and moral stages that all learners go through. Stress upon the psychology of individual differences (e.g., different cognitive learning styles, personality differences) promotes more awareness as to how individual learners vary from one another. *Either semester*

ED 240 Classroom Management in the High School (3 crs.)

Study of different approaches to classroom management in the high school. Developing competencies in various approaches to classroom management, including the maintenance of a sense of order, relating to students as individuals and as members of groups, and creating a positive atmosphere, is stressed. Students gain attendant, meaningful experiences through field work in area high schools. *Either semester*

ED 360 Aims and Philosophy of High School Education (3 crs.)

The aims of high school education, its curriculum, structure and teaching strategies are examined using the concepts and methodologies of philosophy. Developing competencies in thinking clearly and rationally in identifying goals and objectives, designing curricula, and selecting materials, media and techniques are stressed. Emphasis is also placed on understanding the philosophical issues embedded in the rational determination of the above, especially as these relate to education in a multi-cultural society. (This course may not be taken for credit by students who have satisfactorily completed ED 480) *Either semester*

ED 370 Evaluating Teaching and Learning in the High School (3 crs.)

Developing competencies in the design and use of evaluative instruments appropriate to the high school. Emphasis is placed on using the results of evaluation to improve instruction, problems of interpretation, and correcting for bias. *(Prerequisite: ED 230) Either semester*

ED 371 Evaluating Teaching and Learning in the Middle School (3 crs.)

Developing competencies in the design and use of evaluative instruments is stressed. Emphasis is placed on using the results of evaluation to improve instruction, problems of interpretation, and correcting for bias. *(Prerequisite: ED 230) Either semester*

ED 412-430 Strategies for Teaching in the High School (3 crs.)

Strategies, including methods, materials and media, for teaching particular disciplines are studied. Developing competency and versatility is stressed through simulations and guided teaching in area high schools. A student registers for the course appropriate to his major according to the following schedule:

ED 412 Social Studies

ED 421 Biology

ED 414 English

ED 422 Mathematics

ED 415 Behavioral Sciences

ED 424 Foreign Language

ED 416 Earth Sciences

ED 425 Art

ED 417 Geography

ED 426 Speech and Theatre

ED 419 Physical Science

ED 430 Drama

(Prerequisites: ED 230, ED 360, ED 370, FL 324 for ED 424)

ED 414 and ED 416-430 fall semester; ED 412 and ED 415 spring semester

ED 440 Methods and Materials in Secondary Education (3 crs.)

Emphasis is on the analysis of teaching in the modern secondary school. Topics will include: the learning process; establishing objectives; classroom organization and management; meeting individual differences; evaluation; correlation between subject matter fields; and recent developments in methodology and subject matter. Offered summers and evenings only. *(Prerequisite: ED 230 or ED 520)*

*See pages 75-76 for general information regarding course offerings.

Secondary Education and Professional Programs

ED 443 Secondary School Curriculum (3 crs.)

Purposes of the modern secondary school and the curriculum needed to implement them; historical origins, modern development, and future possibilities. Stress is on the manner in which the curriculum is built, behavioral objectives, resource centers, assisting in curriculum construction, and methods of curriculum evaluation. Offered summers and evenings only.

ED 450-461 Strategies of Teaching in the Middle School (3 crs.)

Strategies, including methods, materials and media, for teaching particular disciplines are studied. Developing competency and versatility is stressed through simulations and guided teaching in area schools. A student registers for the course appropriate to his major according to the following schedule:

ED 450 Social Studies/ History	ED 458 Foreign Language
ED 451 English	ED 459 Art
ED 456 Mathematics	ED 461 Science

(Prerequisite: ED 230, ED 371) ED 450 spring semester, ED 451-461 fall semester

ED 480 Philosophy of Education (3 crs.)

Thinking critically and imaginatively about education from the viewpoint of philosophy. Emphasis is placed on understanding the philosophical presuppositions underlying educational practices and policies. *Either semester*

ED 490 Student Teaching Practicum—High School (12 crs.)

Students are assigned appropriate student teaching stations where they work in an approved situation under an experienced supervising teacher. This is a practical experience for one semester in a public school where student teachers are functioning as professional teachers. A college supervisor visits to assist the student teacher. Seminars may be held to exchange experiences. Students are expected to carry a minimum responsible teaching load equal to 50% of the regular teacher's assignment. Full time for one semester. (Prerequisites: acceptance and good standing in Teacher Preparation program, ED 412-426) *Either semester*

ED 491 Internship in High School Education (6 crs.)

A minimum of 300 clock hours will be required in a 9-12 grade setting as a high school teacher. Internship must be less than full time but at least 1/5 time employment in the role for which certification will be sought. Request for this course must be made to professional education office. (Prerequisite: consent of the department)

ED 495 Student Teaching Practicum—Middle School (12 crs.)

Students are assigned appropriate student teaching stations where they work in an approved situation under an experienced supervising teacher. This is a practical experience for one semester in a public school where student teachers are functioning as professional teachers. A college supervisor visits to assist the student teacher. Seminars may be held to exchange experiences. Students are expected to carry a minimum responsible teaching load equal to 50% of the regular teacher's assignment. Full time for one semester. (Prerequisite: ED 450-461 and acceptance and good standing in Teacher Preparation program) *Either semester*

ED 499 Directed Study in High School Education (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: consent of the department) *Either semester*

Other Approved Courses:

ED 380 Contemporary Issues in Education
ED 381 Soviet Education
ED 384 Canadian Education Seminar

ED 504 Critical Studies in Education (3 crs.)

An attempt to develop a synthesis of philosophy, history, sociology and economics as they relate to education. Some of the topics students will research are: Social class, power structures, political systems, and schools.

ED 505 Historical Foundations of Education (3 crs.)

Historical persons, events and movements which have built man's educational establishment from antiquity to current developments in the American school scene. (Prerequisite: ED 480)

ED 520 Psychological Foundations of Education (3 crs.)

A systematic exploration of the various psychological principles related to teaching and application of these principles in specific classroom situations. Special emphasis on social psychology, dynamics in interpersonal relationships and group processes, motivation, and discipline theory. (Prerequisites: PY 100 and one of the following: PY 224, PY 226, PY 252, ED 230)

ED 523 Directed Study in Educational Psychology (credit to be arranged)

Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.A.T. Students who wish to enroll in directed study should obtain the form, Request for Directed Study, at the Graduate School well in advance of registration. The completed form should be filed with the registrar's office at the time of registration. (Prerequisite: acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser)

ED 524 Seminar in Foreign Languages Methods and Materials (3 crs.)

Intended primarily for teachers with some experience, the course will concentrate on new developments in materials and methods, with emphasis on career opportunities, the teachers of culture, individualized instruction and the supervision of student teachers. (Prerequisite: A course in foreign language methods and materials)

ED 541 Improving Middle School Instruction (3 crs.)

Classroom teachers analyze the nature of the transescent (ages 9-14) learner, identify effective middle school practices, and design instruction suited to the unique needs of middle/junior high school students.

School of Education

ED 545 Curriculum Development for the Academically Talented Student in the Secondary School (3 crs.)

Survey of current curricula status and problems that face the academically talented student. A study of techniques for modifying curricula to meet school, community, and individual needs. An examination of means of evaluation of curriculum's effectiveness. Search for local and regional resources to satisfy the academic needs of the talented.

ED 548 Parenting Curriculum Development (3 crs.)

Theory, instructional techniques, and materials for teaching parenting skills in the high school. (*Prerequisites: bachelor's degree and teaching certificate*)

ED 550 Special Topics in Teaching Science (3 crs.)

The course will stress topics of general interest in science education such as computers in science education, laboratory safety, field experiences in science and math anxiety. A series of presentations by guest lecturers will emphasize recent developments in methods and materials used in science and their implementation into the junior high science curricula and will discuss career opportunities. Lectures will be followed by small group discussions. (*Prerequisite: science teaching experience at the pre-baccalaureate level and consent of the instructor*)

ED 560 Special Topics (3 crs.)

Special topics of current relevance in education will be offered from time to time. The topic to be addressed will be announced in pre-registration publications. May take more than once with consent of the adviser. (*Prerequisite: Course prerequisites may be specified depending on the nature of the topic.*)

ED 578 Educational Software Development and Computer Applications I (3 crs.)

An introduction to computer programming and to the BASIC language as it relates to the development of educational software. Significant hands-on experience with computers. As a final project, students will develop software for classroom application. (*Prerequisite: EE 468, ED 468, or consent of the instructor*)

ED 579 Educational Software Development and Computer Applications II (3 crs.)

An advanced course in educational software development which focuses on high resolution graphics on the Apple II computer. Students develop several software packages for direct application in the classroom. Students interested in grades K-6 should register for EE 579. Those interested in grades 7-12 should register for ED 579. (*Prerequisite: EE/ED 578 or consent of instructor*)

ED 580 Philosophical Foundations of Education (3 crs.)

A critical and intensive analysis of selected concepts and beliefs which function as the basis of recent philosophies of education and their relation to current educational practices and policies. Readings from recent philosophers of education. (*Prerequisite: ED 480*)

ED 583 Directed Study in the Philosophy of Education (credit to be arranged)

Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of four credits for an M.A.T.. Grades will be given. Students who wish to enroll in directed study should obtain the form, Request for Directed Study, at the Graduate School well in advance of registration. The completed form should be filed with the registrar's office at the time of registration. (*Prerequisite: acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's adviser*)

ED 584 Educational Software Development: Files (3 crs.)

An advanced course in educational software development. Focuses on the Apple II computer, stressing an understanding of the disk operating system (DOS), sequential and random access files. A major portion of the course is devoted to having students develop software packages for application in the classroom. (*Prerequisite: ED 578, or consent of the instructor*)

ED 590 Practicum—High School (12 crs.)

Graduate students are assigned appropriate student teaching stations where they work in an approved situation under an experienced supervising teacher. This is a practical experience for one semester in a public school where student teachers are functioning professional teachers. A college supervisor visits to assist the student teacher. Seminars may be held to exchange experiences. Students are expected to carry a minimum responsible teaching load equal to 50% of the regular teacher's assignment. Full time for one semester. (*Prerequisite: Acceptance and good standing in Teacher Preparation program, ED 412-430 or ED 440*) Either semester

ED 591 Internship in High School Education (6 crs.)

A minimum of 300 clock hours will be required in a 9-12 grade setting as a high school teacher. Internship must be less than full time but at least 1/5 time employment in the role for which certification will be sought. Request for this course must be made to the department and the of student teaching office. (*Prerequisite: consent of the department*)

ED 592 Sociological Foundations of Education (3 crs.)

A critical examination of the effects of various social institutions, groups, and situations on educational policy and content. (*Prerequisite: SO 202 or consent of the instructor*)

Secondary Education and Professional Programs

Counseling

GC 430 The Guidance Function in School, Agency and Community Settings (3 crs.)

Designed to acquaint the pre-professional counselor with the various aspects of the total guidance program which result in a continuous and meaningful sequence of services to clients, students, professional staff, and the community. Philosophical and psychological issues will be addressed as well as current practices. Pre-practica field component included.

GC 450 Career Counseling Strategies (3 crs.)

Designed to give the counseling professional an intensive, hands-on experience in the techniques and strategies of career counseling. Provides exposure to the major current theories of career life planning and to a range of techniques to be used with clients. Applicable to school (5-12 level) and agency counselors and to persons currently undergoing career change. Pre-practica field component included.

GC 500 Research and Evaluation (3 crs.)

The completion of a research paper is the main objective of this course, which is designed to serve the beginning graduate student. To that end, the course will stress the nature of, and criteria for, conducting and evaluating research. The necessary library techniques and resources for selecting and delimiting problems, appraisal of related research literature, as well as documentation, organization and format of a research study will be reviewed in depth. Concepts in descriptive statistics will also be reviewed. (Prerequisite: EE 420, a statistics course, or consent of the instructor)

GC 502 Research (3-6 crs.)

Original research undertaken by the graduate student. For details, consult the *Graduate School* section of this catalog for information on independent study.

GC 503 Directed Study (1-6 crs.)

Designed for the graduate student who desires to study selected topics in the counseling field or engage in field work. For details, consult the *Graduate School* section of this catalog for information on independent study. (Prerequisite: completion of 15 approved graduate credits and acceptance in the Counseling program)

GC 504 Research and Evaluation II (3 crs.)

The completion of a research project is the main objective of this course, which is designed to facilitate the academic and professional development of the advanced graduate student. This counseling focused research project must be an original work. (Prerequisite: Research and Evaluation I)

GC 521 Survey and Strategies of Childhood Assessment Ages 3-8 (3 crs.)

This course will serve to introduce students to a variety of psychometric instruments available for use during the early childhood years. (Prerequisite: PY 100 and one of the following: EE 420 or GC 533)

GC 522 Measurement of Intelligence: Stanford-Binet (3 crs.)

Training in the administration, scoring and interpretation of the Stanford-Binet Intelligence Scale. A test kit is necessary. (Prerequisite: PY 100 and one of the following: EE 420, a statistics course, or GC 533)

GC 524 Measurement of Intelligence: WAIS-R, WISC-R, and WPPSI (3 crs.)

Training in the administration, scoring and interpretation of the forms of the Wechsler Intelligence Scale. A test kit is necessary. (Prerequisite: PY 100 and one of the following: EE 420, a statistics course, or GC 533)

GC 525 Measurement of Intelligence: Stanford-Binet and Wechsler Scales (3 crs.)

Training in the administration, scoring and interpretation of the Stanford-Binet and Wechsler scales. Access to test kits is necessary. (Prerequisite: PY 100 and one of the following: EE 420, a statistics course, or GC 533)

GC 526 Projective Assessment Techniques I (3 crs.)

A basic training course in the administration, scoring and interpretation of selected projective instruments including the Bender Gestalt, TAT, CAT, HTP and MMPI. Projective aspects of the Wechsler and Stanford-Binet Scales will be emphasized. (Prerequisite: GC 522, GC 524 or GC 525)

GC 527 Projective Assessment Techniques II (3 crs.)

An in-depth experience utilizing a case-study approach in the implementation of battery testing. Advanced techniques utilizing the Bender Gestalt and TAT as well as an introduction to the Rorschach will be included. (Prerequisite: GC 526 or consent of the instructor)

GC 528 Counseling and Development in a Pluralistic Society (3 crs.) (to replace GC 530)

This course will examine counseling theory and practice in the context of human development, diversity, and culture. Diversity will be broadly defined and include, but not be limited to ethnic, racial, and cultural diversity, gender, SES, and sexual orientation. The major counseling theories will be examined with respect to their underlying value systems and related compatibility with mainstream and nonmainstream populations, their perspective on human development, and clinical application. Although primary course emphasis will be on the individual, secondary focus will be on ecological/system approaches and prevention strategies. (Prerequisite GC 430)

GC 529 Cross-Cultural Counseling (3 crs.)

Development of a working knowledge and basic competency in cross-cultural counseling theory and application. To this end, the course will focus on the counselor on both a professional and personal level. Additionally, the course will examine salient issues related to the life experiences of the culturally "different" client and how such experiences impact on the counseling relationship and process. Underlying values and assumptions associated with widely used traditional counseling interventions and their appropriateness with nonmainstream populations will be explored. Traditional and nontraditional culturally consonant counseling approaches will also be discussed. (Prerequisites: GC 430 and GC 528)

School of Education

GC 530 Counseling Theory and Practice (3 crs.)

An analysis of the major theories of counseling and the application of techniques utilized in the counseling process will be emphasized. Discussion of situational problems and role playing will allow for the practice of each model as applied in counseling settings. *(Prerequisite: GC 430)*

GC 531 Organization and Administration of Guidance Programs (3 crs.)

Administrative skills required in needs assessment, program design and evaluation of effectiveness will be emphasized. Current laws and regulations will be reviewed and sources of funding explained. Students will develop research and communication approaches to respond appropriately to social, economic and political demands within a school or agency setting. *(Prerequisite: GC 430)*

GC 532 Psychological Assessment (3 crs.) (to replace GC 525 and GC 533)

Examination of the basic principles and components of individual and group psychological assessment. The student will be introduced to the most commonly used measurements for assessing intelligence, achievement, aptitude, interest, and personality. Specific training in the administration, scoring, and interpretation of selected evaluation instruments, such as the Wechsler Intelligence Scales and Stanford-Binet, will be provided. Test score interpretation and report writing within a counseling content will be emphasized, as well as an examination of critical issues related to the utilization of traditional tools with nonmainstream populations. Pre-practica field component included. *(Prerequisites: PY 100, GC 430, GC 529 and one of the following: EE 420, PY 404, or a statistics course)*

GC 533 Psychological Measurement (3 crs.)

Introduction to the basic principles of group psychological testing and the most commonly used instruments for assessing intelligence, achievement, aptitude, interest, and personality. Emphasis will be placed on test score interpretation within a counseling context. Pre-practica field component included. *(Prerequisite: EE 420 or a course in statistics and GC 430 and GC 530)*

GC 534 The Professional Counselor: Standards, Ethics, and Legal Issues (3 crs.) (to replace GC 541)

This course will examine current trends in the area of ethical and legal standard for practice that directly affect the professional counselor, as well as the process of ethical decision-making. Federal and state legislation dealing with confidentiality, duty to warn, neglect and abuse, sex discrimination, family rights, and special education will be among the topics to be studied. Ethical standards of the American Counseling Association and the American Psychological Association will be reviewed and discussed. Guidelines and competencies for working with multicultural and other special populations will also be examined. *(Prerequisite: GC 529)*

GC 535 Applied Counseling: Adolescent-Adult (3 crs.)

Developmental issues, diagnostic techniques and individual and group counseling strategies appropriate for use with adolescents and/or adults will be addressed. Report writing, referral and consultation procedures and current trends will be studied. Pre-practica (5-12) field component included. *(Prerequisite: GC 530 and GC 538)*

GC 536 Applied Counseling: Pre-Adolescent (3 crs.)

Developmental issues, diagnostic techniques and individual and group counseling strategies appropriate for use with pre-adolescents will be addressed. Report writing, referral and consultation procedures and current trends will be studied. Pre-practica (N-9) field component included. *(Prerequisite: GC 530 and GC 538)*

GC 537 The Counseling Process (3 crs.)

Course will focus on the relationship, re-orientation and accomplishment phases of the counseling process. Primary readings will be utilized. Interventions and techniques to promote counseling effectiveness will be discussed and practiced. *(Prerequisite: GC 530 or consent of the instructor)*

GC 538 Theory and Process of Group Interaction (3 crs.)

An examination of the theories and processes of group dynamics and their relationship to counseling philosophy. Special emphasis will be placed on the synthesis of leadership, membership, and purpose, as well as the evaluation of the appropriateness of various group counseling applications. *(Prerequisite: GC 530)*

GC 539 Career Information and Placement (3 crs.)

Emphasis is placed on the role of the counselor in the career decision-making process. Topics include a survey of selected theories of vocational choice and development and review of the theoretical concepts, issues and trends in career education. The use of career and educational information is considered. Pre-practica field experience included. *(Prerequisite: GC 430)*

GC 540 Advanced Counseling Theory and Practice (3 crs.)

An intensive application of counseling practice in a personalized rather than theoretical manner. Theory will be reviewed from the perspective of the student's personal counseling style. An atmosphere of constructive criticism will be developed. Maximum use of audio and video tapes will be made. *(Prerequisite: GC 530)*

GC 541 The Counselor's Role in the Implementation of Federal/State Legislation (3 crs.)

Course is designed to provide the student with information outlining federal and state laws that directly affect the professional counselor. Legislation dealing with special education, family rights and privacy, child abuse and sex discrimination will be among the topics studied. This course will focus on legislation from the view of the ethical issues involved as well as the demands and constraints placed upon the counselor. Currently proposed legislation and legal trends will be identified. *(Prerequisite: GC 430)*

GC 542 The Facilitation of Group Experience (3 crs.)

An introduction to the concepts and practices of facilitating various types of group experiences. A number of leadership methods will be presented, and each participant will experience

Secondary Education and Professional Programs

a leadership role under controlled circumstances. (*Prerequisite: GC 538 or consent of the instructor*)

GC 543 Theories of Career Development (3 crs.)

The career development process, the history of its study, its characteristics at each life stage, and the current issues in its facilitation for women, men, couples, and minority persons will constitute the content of this course. Practical applications will include an examination of activities and materials designed to bring about greater awareness of needs, values, interests and abilities related to career decision making. (*Prerequisite: GC 450, GC 539 or consent of the instructor*)

GC 544 Introduction to Reality Therapy (3 crs.)

Course is designed to bring about an awareness and an understanding of the philosophy and basic concepts of reality therapy. Activities will enhance opportunity to experience reality therapy as a technique for counseling. (*Prerequisite: GC 530*)

GC 545 Counseling from an Existential-Humanistic Perspective (3 crs.)

An examination of the philosophy of existentialism with particular emphasis on its relevance to counseling. Topics include the existential crisis, authenticity, resistance, the role of the counselor, the self, anxiety and choice. (*Prerequisite: GC 530*)

GC 546 Parent and Family Counseling (3 crs.)

An introduction to parent and family therapy theory and technique. Role-playing and viewing videotapes of sessions will aid participants in mastering the material. (*Prerequisite: GC 530*)

GC 547 Individual Psychology in Counseling and Consultation (3 crs.)

Based on the theoretical orientation of individual psychology, the course is designed to develop counseling and consultation skills. Applications are made to a range of clients and students, with an emphasis on the school-age child and adolescent. Major topics considered are personality development and assessment, counseling process, consultation, academic motivation and learning, program development in school systems, and working with parents. (*Prerequisite: GC 530*)

GC 548 Advanced Counseling Theory and Practice: Adolescent-Adult (3 crs.) (to replace GC 540)

This didactic seminar is designed to provide the advanced counseling student with an opportunity to more intensively examine and apply counseling practice in a personalized rather than a theoretical manner. The course will also encourage a reexamination of counseling theory from the perspective of the student's personal counseling style. An atmosphere of constructive criticism will be developed and maintained to facilitate counselor self-awareness and ongoing refinement of the student's personal counseling style. Maximum use of audio and video tapes, as well as role-play will be made. Pre-practica (adolescent - adult) field component included. (*Prerequisite: GC 535*)

GC 549 Advanced Counseling Theory and Practice: Pre-Adolescent (3 crs.) (to replace GC 540)

This didactic seminar is designed to provide the advanced counseling student with an opportunity to more intensively

examine and apply counseling practice in a personalized rather than a theoretical manner. The course will also encourage a reexamination of counseling theory from the perspective of the student's personal counseling style. An atmosphere of constructive criticism will be developed and maintained to facilitate counselor self-awareness and ongoing refinement of the student's personal counseling style. Maximum use of audio and video tapes, as well as role-play will be made. Pre-practica (pre-adolescent) field component included. (*Prerequisite: GC 536*)

GC 550 Psychometrics in 766 for the Counselor (3 crs.)

Training in the administration, scoring and interpretation of the psychometric instruments used by counselors in work with special needs populations. Will include a demonstration of such instruments as the Leiter, Sequin, Bender-Gestalt, WRAT, PIAT, Merrill Palmer, Dvorine, CMMS, and VMI. (*Prerequisite: GC 522, GC 524, or GC 525*)

GC 551 Student Personnel Work in Higher Education (3 crs.)

An intensive introduction to the literature of student personnel and student development. Basic concepts, philosophies and current models, practices and issues in the field will be studied. (*Prerequisite: GC 530*)

GC 552 The Role of the Counselor in the Community Agency (3 crs.)

The role of the counselor in a variety of community settings will be examined. Theoretical orientation will be viewed in relation to the practical demands of community settings. Issues related to legislation, staffing, intake and referral, community liaison, funding and program evaluation will be discussed. (*Prerequisite: GC 530*)

GC 553 Seminar in College Admissions (3 crs.)

An introduction to the matters related to the transition of students to higher education. Specifically designed to allow the individual to experience and procure the necessary background to function as a secondary school or college admissions counselor. (*Prerequisite: GC 530*)

GC 554 Internship—School Guidance Counselor (N-9) (6 crs.)

GC 555 Internship—School Guidance Counselor (5-12) (6 crs.)

An internship (GC 554 or GC 555) is less than full-time but at least one-fifth time employment in the role of school guidance counselor at the level of the certificate desired. An internship includes a minimum of 300 clock hours at the practicum site. Supervision is the responsibility of a member of the Counseling program staff. Students must register with the program coordinator by May 15 for the fall semester internship, or by October 15 for the spring semester internship. (*Prerequisite: 30 graduate credits in the Counseling program, including all department core requirements, documentation of three appropriate pre-practicum field experiences, and a half practicum or consent of the program coordinator*)

GC 556 Practicum—School Guidance Counselor (N-9) (6 crs.)

GC 557 Practicum—School Guidance Counselor (5-12) (6 crs.)

A practicum (GC 556 or GC 557) must be completed in the role of school guidance counselor, at the level of the certificate desired. A full practicum includes a minimum of 300 hours at the practicum site, and a half practicum includes a minimum of 150

School of Education

hours. Supervision is the joint responsibility of the Counseling program staff and a cooperating school practitioner. Students must register with the program coordinator by May 15 for the fall semester practicum, or by October 15 for the spring semester practicum. (*Prerequisite: 30 graduate credits in the Counseling program, including all department core requirements and documentation of three appropriate pre-practicum field experiences or consent of the program coordinator*)

GC 558 Practicum—Agency Counselor (6 crs.)

GC 559 Practicum—College Student Personnel (6 crs.)

Candidates must complete a minimum of a 150 clock hour practicum within one calendar year in a role and at a site approved by the coordinator of the Counseling program. Students must register with the program coordinator by May 15 for the fall semester practicum and by October 15 for the spring semester practicum. (*Prerequisite: 30 graduate credits in the Counseling program including all department requirements and documentation of appropriate field experience*)

GC 560 Special Topics in Counseling (3 crs.)

Special topics of current relevance in counseling will be offered from time to time. The topic to be addressed will be announced in pre-registration publications. May be taken more than once with the consent of the adviser. (*Prerequisite: at least 9 hours in counseling or consent of the instructor. Course prerequisites may be specified depending upon the nature of the topic.*)

GC 561 Death/Dying/Bereavement Counseling (3 crs.)

Introduction to the theory and application of grief work principles as they apply to adults to adults, children, and families, as well as others who are indirectly impacted. Emphasis will be on grief counseling, rather than grief therapy and will focus primarily on the "bereaved". The course will stress the importance of counselor self awareness around this loaded area and counselor impact on the therapeutic process. At the core of all course will be a respect for the "client" and the larger world from which he comes, a recognition of the importance of culture and other critical intervening factors on the counseling and grief process, and the maintenance of high ethical standards. (*Prerequisites: GC 430 and GC 530*)

GC 562 Contemporary Psychosocial Issues in Counseling - Assessment and Strategies (3 crs.)

This course will focus on contemporary issues confronting the professional counselor in educational, agency, and community settings. Such cutting edge issues may include, but not be limited to, substance abuse, AIDS/HIV, childhood, adolescent, and adult trauma such as sexual and physical abuse, domestic violence, and PTSD, teen pregnancy/parenthood, and human sexuality. The advanced counseling student will become acquainted with the current research on each area, and will be actively encouraged to explore his own feelings about the issues and the predominate populations served. Traditional and nontraditional intervention strategies will also be explored. (*Prerequisites: GC 430 and GC 530*)

Educational Leadership

SA 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

SA 503 Directed Study (3 crs.)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

SA 510 Seminar on Educational Leadership for the Future (3 crs.)

Designed to provide for individual self-appraisal, institutional assessment, and professional development planning. Offered as a series of six bi-weekly sessions using Friday evenings and Saturday mornings. Provides information on educational leadership and management concepts, situations, problems; provides an introduction to faculty and program; offers counseling assistance for career planning.

SA 511 Educational Leadership and Managerial Effectiveness (3 crs.)

Facets of educational leadership and management involved in the effective development of programs designed to meet the needs of students, staff, and the community will be explored. Emphasis is on goal setting, establishing priorities, allocating resources, and facilitating the educational process in response to those needs. Students are expected to do in-depth reading of recent research, particularly in the area of educational administration. (*Prerequisite: SA 510 or consent of the instructor*)

SA 513 Special Topics in Educational Administration (3 crs.)

Selected and timely topics in the various fields of emphasis pertaining to educational administration. The topics to be addressed will be announced in pre-registration publications. May be taken more than once with the consent of the adviser. (*Prerequisite: at least nine hours in educational administration or consent of the instructor. Additional prerequisites may be specified depending upon the nature of the topic.*)

SA 515 Contract Administration for Educational Leaders (3 crs.)

Combining theory with practice, this course introduces labor relations in the public sector and provides potential and veteran administrators with opportunities to attain and/or update managerial skills relating to the administration of negotiated agreements. Topics include the historical, political, and legal context of labor relations; contract administration and grievance arbitration as methods of conflict resolution; situational leadership grievances; arbitration hearings; rules of construction commonly utilized by arbitrators governing such matters as timeliness, discipline, evaluation, seniority and the like. (*Prerequisite: SA 510 or ED 570, or the consent of the instructor*)

Secondary Education and Professional Programs

SA 559 Administration of Community Education Program (3 crs.)

Development of an understanding of how administrators can develop a successful educational process in their neighborhood through community involvement and maximum facility planning. (Prerequisite: SA 510 or consent of the instructor)

SA 560 The American Public School Today (3 crs.)

A survey of the principles of school organization and administration: program, pupil services, personnel, plant and equipment, and public relations. Emphasis is on common practice, issues and trends. Experience in staff participation through the use of the administrative process in class work and projects both individual and group. (Prerequisite: ED 380, or ED 382, or ED 480, or consent of the instructor)

SA 561 Elementary School Administration (3 crs.)

SA 562 High School Administration (3 crs.)

SA 563 Middle School Administration (3 crs.)

The application of general principles of school administration to the specific problems of the elementary, middle, or high school. Emphasis is on curriculum development and program evaluation; personnel supervision and evaluation; goal setting, establishing priorities, allocating resources, facilitating the educational process in response to the needs of learners, teachers, and the community; school law; budgeting; plant management; community education; human concerns including dealing in an equitable, sensitive, and responsive manner with students, teachers, parents, and the community. (Prerequisite: completion of 15 credits applicable to the program)

SA 564 Selection and Development of Educational Personnel (3 crs.)

Staff selection and development will be studied including theories and techniques of supervision, evaluative procedures to assess the effectiveness of programs and personnel, organizational characteristics of schools and strategies for institutional change, inservice education, and personnel and program planning. (Prerequisite: SA 510 or consent of the instructor)

SA 565 School Finance and Business Administration (3 crs.)

A study of the financial support for public schools from local, state, and federal governments. Fiscal planning, budgeting, plant management, state and municipal financing, accounting and purchasing procedures, distribution of supplies and services, transportation, and food service will receive attention. (Prerequisite: SA 510 or consent of the instructor)

SA 566 School Plant Planning and Administration (3 crs.)

For the specialist in school administration who may ultimately go on to school district administration at the central office. A study of in-depth coordination of the many factors involved in planning, construction, maintaining and administering the modern school plant. (Prerequisite: SA 510 or consent of the instructor)

SA 567 Human Concerns in the Schools (3 crs.)

A study of theory, research, and practice in the area of human relations in the school including public relations; clear and appropriate communication; and equitable, sensitive, and responsive relations with students, teachers, parents, and the community. (Prerequisite: SA 510 or consent of the instructor)

SA 568 Seminar in School Administration (3 crs.)

Study and analysis of current problems and issues in school administration. (Prerequisite: completion of 24 credits applicable to the M.Ed. in School Administration program or, for CAGS students, consent of the instructor)

SA 569 Legal Aspects of School Administration (3 crs.)

Legal rights, duties and liabilities of school personnel in general relationship to the school committee in Massachusetts will be studied. Intended for administrators, prospective administrators, and classroom teachers interested in the legal aspects of school committees, school property, teaching contracts, labor relations and collective bargaining, tenure, prevention of injury and accidents to students, relationships with parents, and a general survey of educational law cases at the local, state, and national levels. (Prerequisite: SA 510 or consent of the instructor)

SA 570 Contemporary Issues in School Administration (3 crs.)

Designed to help the practicing and aspiring administrator acquire a knowledge base for dealing with timely issues which confront school personnel, this course features research and discussion of topics of immediate concern not normally covered in other program offerings. (Prerequisite: SA 510 or ED 570 or consent of the instructor)

SA 571 Introduction to Theory and Understanding of Group Interaction (3 crs.)

Directed to teachers and administrators who wish to be more effective in working with groups. Consideration will be given to the group process and staff development with emphasis on the human relations aspect of interpersonal relationships. Group activities will be based on improving understanding and utilization of skills in such areas as communication, cooperation, problem solving, conflict management and decision making. (Prerequisite: SA 510 or consent of the instructor)

SA 572 Technology for School Administrators (3 crs.)

New administrative software will be reviewed as each student becomes proficient in the use of a microcomputer. Students will also become familiar with educational uses of interactive television, interactive videodisk and hypercard. Distance learning and cooperative projects will also be addressed. (Prerequisites: SA 510 or consent of instructor)

SA 573 Innovative Administration Practices in Modern Education (3 crs.)

An in-depth study of six or more topics that have current impact on school organization and administration. The innovations studied, selected in part by the class itself, vary from year to year, and may include such areas as accountability, cultural pluralism, differentiated staffing, negotiations, open campus, open education PPBS, or rescheduled school year. (Prerequisite: SA 510 or consent of the instructor)

SA 575 Research Issues in School Administration (3 crs.)

The main focus of this course is on theory building and its pragmatic application to school administration problems. Course participants will review the literature of school organizations and critically analyze problems in school administration derived from this examination. Issues of research methodology that influence the school administrator's role and responsibilities will be

School of Education

examined. Students considering topics for CAGS in Education leadership projects and doctoral dissertations are particularly encouraged to enroll. (*Prerequisite: SA 510 or ED 570 or consent of the instructor*)

SA 576 Issues for Women Administrators (3 crs.)

Directed towards a better understanding of the challenges and obstacles that women face as they remain a minority in educational administration. A review of current research as well as one-on-one discussions with women currently in leadership positions will be addressed. (*Prerequisites: SA 510 or consent of the instructor*)

SA 577 Systems Planning for Educational Leaders (3 crs.)

Successful educational planning and managerial strategies to assess and define needs, establish priorities, set goals, allocate resources, implement plans, and facilitate the instructional process in response to the needs of learners, teachers, and the community are explored. Specific innovative and effective techniques applied include reference behavior graphs, stryker matrices, causal loop diagrams, PERT, needs assessment, nominal group, simulation, and linear programming. Additionally, the course examines the historical and legal background for educational policies and related recent research in educational administration. (*Prerequisite: SA 510 or ED 570 or consent of the instructor*)

SA 578 Curriculum Improvement (3 crs.)

Contemporary theories of curriculum design and evaluation are explored. Students are expected to develop an eclectic approach to curriculum improvement based upon those theories and upon contemporary organizational factors, including leadership and management. Material is presented relating to developing community education programs, and to personnel and program planning. (*Prerequisite: SA 510 or consent of the instructor*)

SA 579 Diversity Issues for School Leaders (3 crs.)

This course is designed to assist in the focusing of school administrators and leaders on issues of diversity and assessing how these issues will impact the total school community. (*Prerequisites: SA 510 or the consent of the instructor*)

SA 581-582 Administrator Extern Program I and II (3 crs. each semester)

A blend of on-the-job training with a seminar approach to administration that is largely self-directed, evolves from the problems of the individuals comprising the group, is informal and takes place in a setting removed from the distractions of everyday life, provides long uninterrupted periods for discussions and interaction of problem statements and of ideas shared in formal presentation.

SA 580 Practicum in Administration of Special Education (6 crs.)

SA 583 Practicum in Supervisorship/Directorship (6 crs.)

SA 584 Practicum in Elementary School Principalship (6 crs.)

SA 585 Practicum in Middle School Principalship (6 crs.)

SA 586 Practicum in High School Principalship (6 crs.)

SA 587 Practicum in Superintendent/Assistant Superintendency (6 crs.)

SA 588 Practicum in Directorship of Guidance (6 crs.)

SA 589 Practicum in Directorship of Pupil Personnel Services (6 crs.)

Assumption of administrative responsibility, in the role and at the level identified by the course title, in a school under the joint supervision of a practicing administrator, in the role and at the level, who is properly certified and tenure-experienced, and a faculty member from the college. Requires a minimum of 150 clock hours, 10 hours weekly for a semester of at least 15 weeks or 5 hours weekly for a school year of at least 30 weeks. (*Prerequisite: completion of all pre-practicum credits applicable to the program*)

SA 591 Seminar in School Administration: The Superintendency (3 crs.)

Examination of major issues and problems confronting school superintendents. Students will be expected to study the relevant literature pertaining to school administration and prepare scholarly papers for class presentation. (*Prerequisite: completion of 18 hours applicable to M.Ed. in School Administration or CAGS in Education*)

SA 590 Administrator of Special Education Internship (6 crs.)

SA 593 Supervisor/Director Internship (6 crs.)

SA 594 Elementary School Principal Internship (6 crs.)

SA 595 Middle School Principal Internship (6 crs.)

SA 596 High School Principal Internship (6 crs.)

SA 597 Superintendent/Assistant Superintendent Internship (6 crs.)

SA 598 Director of Guidance Internship (6 crs.)

SA 599 Director of Pupil Personnel Internship (6 crs.)

Employment less than full time, but at least one-fifth time, in the role and at the level identified by the course title, in a school under appropriate school and college supervisors. Requires a minimum of 300 clock hours, 10 hours weekly for a school year of at least 30 weeks for those students having substantial employment in the appropriate role and at the appropriate level or 5 hours weekly for two such school years for students having minimal employment in the role and at the level. (*Prerequisite: completion of one-half of the applicable pre-practicum courses*)

Secondary Education and Professional Programs

Media

ME 310 Introduction to Instructional Media (3 crs.)

Introduction to instructional media and technology incorporating selection, production, evaluation and utilization of instructional materials. Instruction in application of still pictures, slides, filmstrips, recording, radio, television, and other media. This course is highly recommended for those people involved with training programs in business, industry, and/or education. *Either semester*

ME 315 Media Presentation Skills for Business and Management Training (3 crs.)

This course will help students develop basic media techniques. Instruction will center around the mastery of media presentation skills for those in business, management, and related fields. *Offered once in three years*

ME 320 Sound-Slide Production Techniques (3 crs.)

This course provides an opportunity to learn basic techniques for producing slide-tape productions. Skills include planning presentation, scripting, storyboarding, photographic techniques, and sound recording. These skills are valuable for people in fields such as education, business, advertising, and/or public relations where training or presentation of messages is important. *Offered evenings and summers only.*

ME 412 Communication Theory (3 crs.)

Applies basic concepts of communication to problems related to training and instruction. Modern techniques and applications will be thoroughly discussed and practiced. *Offered evenings and summers only.*

ME 425 Microcomputers in Libraries and Media Centers (3 crs.)

An introduction to the use of microcomputers in media centers and small libraries. This course is designed for those who have little or no background with computers. It is appropriate for media specialists, librarians, students enrolled in the Media Certificate program and others who wish to become computer literate for application to and management of school and business media centers and small libraries. Topics will include the historical development and introduction to the use of programs in BASIC language and an investigation of the required hardware for setting up a computer system. *Fall semester*

ME 440 Advanced Techniques in Instructional Media (3 crs.)

Directed study course. Development of a multi-media package of materials to be used in a training or instructional setting. Materials are produced by the student under the guidance of the instructor. Formerly ME 420. (*Prerequisite: AR 216, 310, 456, 460 or consent of the instructor*)

ME 454 Script Writing for Radio, Television, and/or other Media (3 crs.)

This course explores the many techniques necessary for the design of scripts for use in radio and television. The student will write scripts for actual studio production. *Offered alternate years, fall semester*

ME 456 Radio and TV Production I (3 crs.)

The student will learn all of the technical operations necessary to direct radio and TV programs. Students will work on actual productions. *Fall semester*

ME 458 Radio and TV Production II (3 crs.)

Designed to make the student proficient in the production of radio and TV programming, with stress upon being able to make, obtain, and set up necessary props, background, trick camera shots, and sound effects. (*Prerequisite: ME 456 or consent of the instructor*) *Spring Semester*

ME 460 Graphics for Designing Media (3 crs.)

An introductory course in basic graphic skills necessary for production instructional materials and/or graphics for television. Course includes instruction in the use of simple mechanical lettering devices; mounting and laminating techniques; diazo and color-lift transparency production; composition and related skills. *Spring semester and summer session only*

ME 464 Management of Instructional Media (3 crs.)

The following functions are discussed: personnel, budgeting, purchasing, analysis of materials and equipment, in-service training, curriculum support, and classification and cataloguing of instructional materials. (*Prerequisite: consent of the instructor*) *Offered evenings and summers only*

ME 466 Cinematography I (3 crs.)

Basic film production techniques and their applications are taught. Topics such as scripting, the motion picture camera, lighting, shooting, splicing and editing are included. Students will work with super 8mm and/or 16mm equipment and materials. *Either semester*

ME 498 Internship in Media and/or Librarianship (3-15 crs.)

Offered to advanced undergraduate students who wish to acquire a supervised practical experience within their field of study. (See information in this catalog under *Academic Programs* for a more complete description). (*Prerequisite: consent of the department*) *Either semester*

ME 499 Directed Study in Non-Print Media (1-3 crs)

Open to juniors and senior who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department*) *Either semester*

Other Approved Courses:

ME 459 Advanced Radio and Television Production

ME 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field (i.e. nonprint instructional media). For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

ME 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field (i.e. nonprint instructional media). For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

School of Education

ME 524 Seminar in Instructional Media (3 crs.)

This course is designed to carry out a systematic review and critique of media research literature and to bring about the ability to design and execute a research study pertinent to the field. Selected research and literature will be reviewed and analyzed. *(Prerequisite: EE 420 or consent of the instructor)*

ME 553 School Public Relations (3 crs.)

The necessity for a well-informed public to foster good school public relations. All necessary media will be discussed: radio, television, newspapers, magazines, school publications, teacher-parent and administrator-teacher-parent relationships. Emphasis will be place on communication theory.

ME 556 Operation and Control of a Radio Station and a Television Studio (3 crs.)

This course is intended for graduate students who are planning to be media specialists. It is designed to give the student an operational knowledge of the skills necessary to operate a radio station and a television studio. Production skills are also included.

ME 558 Radio and Television Production (3 crs.)

This course is intended for graduate students who are planning to be media specialists. It provides for the student with basic background in radio station and television studio operation opportunities to practice production and programming. *(Prerequisite: ME 566 or consent of the instructor)*

ME 560 Graphics for Media Specialists (3 crs.)

This course is designed for graduate students. It is a course in intermediate graphic skills necessary for producing instructional materials and/or graphics for television. It is particularly intended for the person who is planning to be a media specialist. Course includes instruction in the use of simple mechanical lettering devices; mounting and laminating techniques; diazo and color-lift transparency production; composition and related skills. *(Prerequisite: consent of the instructor)*

ME 566 Cinematography II (3 crs.)

Advanced techniques of film production in all of its technical phases, including production, design, editing, and sound synchronization. *(Prerequisite: ME 466 or consent of the instructor)*

ME 584 Administration of Media Programs (3 crs.)

This course is designed for graduate students. It covers the principles and practices of the administration of media programs, particularly from the unified media approach. Areas of study include planning, equipping, servicing, and operation. Formerly ME 564. *(Prerequisite: consent of the instructor)*

ME 595 Professional Practicum/Internship (6 crs.)

Involves observation and participation in all important aspects of administration, including selection and organization of materials; reference and bibliographic services, and techniques of teaching media use. This course must be pursued at a media center approved by the secondary education and professional programs department at Bridgewater and may only be waived, in the case of non-certification students, if the student has had considerable experience as a media specialist in a situation acceptable to the department. *(Prerequisite: completion of, or enrollment in, all other courses of the program)*

Librarianship

ML 102 Introduction to Information Resources (1 cr.)

This course introduces the use of information resources, especially at the Maxwell Library, in order to attain an ability to work with the research tools and to know the services which are available. Satisfies the GER in locating and processing information; must be taken within the first 30 credits at Bridgewater State College. *Either semester*

ML 300 Introduction to Unified Media Services (3 crs.)

The philosophy, functions, and evaluation of the media center in the school for future teachers, administrators, librarians, and media specialists. Correlation of the media center with the modern curriculum, the use of print and non-print materials in the media center, and the mutual cooperation of administration, faculty, and students. 40 hours of observation in a variety of school media centers is required as part of the course. *Either semester*

ML 310 Children's Literature (3 crs.)

Reading, listening and viewing interests and abilities, from pre-school through the elementary grades, as important considerations in evaluation and selection of materials; analysis of literary and artistic elements, and cultural influences of both past and present. Types include myth and folklore, poetry, modern fanciful tales, realistic fiction, and books in special fields, e.g., biography, history, and science. *Either semester*

ML 320 Literature for Young Adults (3 crs.)

Survey of literature and audio visual materials for adolescents. Includes applicable principles of adolescent psychology, a brief history of the development of this literature, criteria and aids for selection, techniques in motivation and reading guidance, and skills in reading, listening and viewing. Designed for teachers, librarians, and media specialists working with junior and senior high school students. *Spring semester*

ML 370 Reference Materials and Their Use (3 crs.)

Introduction to the basic reference books in all subject disciplines. Bibliographic search assignments give practical application of techniques using all the resources of the media center. *Spring semester*

ML 430 Management of Media Programs (3 crs.)

Principles and practices in administration and service; the role of the media center in the school's educational program, pupil instruction in media center use; the planning and equipping of the media center; and other aspects of organization. *Fall semester*

ML 440 Organization of Materials (3 crs.)

Presentation of practical techniques for print and non-print cataloging with emphasis on Dewey Decimal classification and Sears Subject Headings. Some time is given to the general processing of materials and to evaluation of commercial cataloging services. *Fall semester*

Secondary Education and Professional Programs

ML 453 Sharing Literature with Children (3 crs.)

Traditional and contemporary storytelling, reading aloud, response-centered activities, book talks, book-related film programs based on the concept of sharing as an integral part of a literature program; emphasis on selection, planning, techniques of presentation, e.g., puppets, flannelboard, hook-and-loop, and evaluation. *Either semester*

ML 498 Internship in Librarianship (3-15 crs.)

Offered to advanced undergraduate students who wish to acquire a supervised practical experience within their field of study. (See information in this catalog under *Academic Programs* for a more complete description). (*Prerequisite: consent of the department; formal application required*) *Either semester*

ML 499 Directed Study in Library Science (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department; formal application required*) *Either semester*

ML 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

ML 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

ML 510 Reference and Information Resources (3 crs.)

Stresses selection and analysis of reference books and services for school and small public library media centers. Bibliographic searching will include print and automated sources.

ML 515 Cataloging and Classification (3 crs.)

Includes an analysis of the theory of classification and information systems. Presentation of techniques for print and non-print cataloging with emphasis on Dewey Decimal, Library of Congress, Sears, and Anglo-American Rules. Practical application utilizing automated resources.

ML 520 Collection Development (3 crs.)

Criteria and policies in selection of print and non-print material for reader interest and curriculum enrichment, with emphasis on practical applications and appraisal of bibliographic aids and current review practices. Formerly ML 452. *Offered evenings and summers only*

ML 525 Online and Optical Information Retrieval (3 crs.)

An introduction to the origin and scope of online services and databases with emphasis on hardware, search techniques and strategy. Some attention is given to managing the service and training staff and patrons in the school library media center. (*Prerequisite: ML 510*)

ML 530 Administration of the Library Media Center (3 crs.)

Library/media centers and their governing agencies, scientific

management principles, organization and operation of the library media center department, personnel problems and procedures, budget preparation, statistics, quarters, and planning.

ML 540 Current Technology for Library Media Centers (3 crs.)

Provides background in the new and emerging technologies stressing the carriers and media necessary to store and circulate information. Some attention will be given to tools and techniques of special interest to school library media services. (*Prerequisites: ME 310 or equivalent*)

ML 545 Technology Applications in Library Programming (3 crs.)

Practical application including program production, of the current technology in school library media functions that reach out to students and teachers. Attention will be given to technical processing and management functions as well as patron services.

ML 548 Advanced Cataloging and Classification (3 crs.)

Theoretical discussion and practical application of techniques in detailed cataloging with emphasis on Library of Congress classification and subject headings. Includes non-book cataloging. (*Prerequisite: ML 440 or ML 515*)

ML 553 Foundations of Library and Information Science (3 crs.)

Form and function of classical, medieval, and scholarly libraries; the public library as the people's university; development of information centers, libraries, and media centers, and their role in contemporary society.

ML 558 Advanced Studies in Literature for Children and Young People (3 crs.)

A seminar format which offers the student an opportunity to explore recent artistic, literary, and social developments in books and media for the young, or for study of particular genres or themes. (*Prerequisite: ML 310 or 320 or consent of the instructor*)

ML 559 Advanced Reference I (3 crs.)

Research methods using specialized reference sources, professional journals, and audio-visual materials, intended for retrospective studies in history, literature, music, philosophy, religion, and the arts. (*Prerequisite: ML 370 or ML 510*)

ML 560 Advanced Reference II (3 crs.)

Research methods using specialized reference sources, professional journals, government documents, microforms, and audio-visual materials, intended for the study of the social and behavioral sciences and services, and pure and applied science and technology, focusing on contemporary materials and topics. (*Prerequisite: ML 370 or ML 510*)

ML 566 Computer and Systems Design for Small Libraries (3 crs.)

Survey of developments in information retrieval and other library applications of modern procedures in acquisition, circulation, management, and periodical control.

School of Education

ML 569 The Book Arts (3 crs.)

Traces the development of the written word from the earliest alphabet to today's computerized publishing. The history, art, and science of the book include field study of book production; manuscripts, rare books and bindings; and award-winning books.

ML 576 Research Problems in Library Literature (3 crs.)

Designed for special projects for advanced students desiring individual instruction in the methods of library research. *(Prerequisite: Consent of the Department)*

ML 590 Seminar on Librarianship (3 crs.)

Intended as a culminating exercise in administrative librarianship. It will include study and analysis of current problems and issues in library administration. Students will seek solutions to these through reading and research. *(Prerequisite: A minimum of 12 credit hours in Library Science and consent of the Adviser)*

ML 595 Professional Practicum (6 crs.)

Involves observation and participation in all important aspects of administration, including selection and organization of materials; reference and bibliographic services, and techniques of teaching library use. This course must be pursued at an approved media center and may only be waived, in the case of non-certification students, if the student has had considerable experience as a media specialist in a situation acceptable to the Department. *(Prerequisite: completion of, or enrollment in, all other courses in the program)*



Department of Special Education

Chairperson: Professor Tracy Baldrate

Professors: William Murphy, Paul Prescott, Lidia
Silveira

Undergraduate Programs

Bachelor of Science in Education

The Department of Special Education offers programs primarily designed to meet the needs of undergraduates who are interested in special education and in certification as a Teacher of School Age Children with Moderate Special Needs. Under new state certification requirements, all teachers certified after October 1, 1994 are required to have a major in the liberal arts or sciences. Students who wish to be special education teachers are required to select a major in special education and a major in the liberal arts or sciences. Specific information is available from the Department of Special Education.

All students planning to pursue a teacher education program of study must apply for admission to and be accepted in the teacher education program. Undergraduate students seeking certification must consult the section of this catalog entitled *School of Education* for information and important institutional deadlines.

The following courses are required for students completing the Special Education major prior to October 1, 1994.

SE 211	The Special Needs Learner in the Elementary School	3
or		
SE 212	The Special Need Learner in the Elementary School	3
SE 317	Teaching Strategies in Mainstreamed Programs	3
SE 400	The Culturally Different Child With Special Needs	3
SE 420	Strategies for Individual Educational Programming	3
SE 435	Behavioral Interventions in Special Education	3
SE 436	Consulting Skills for Special Educators ..	3
SE 438	Career Education for Special Needs Learners	3
SE 439	Diagnostic Techniques for Special Educators	3
CD 290	Language Acquisition and Development .	3
SE 491	Student Teaching Practicum (N-9)	7.5
or		
SE 591	Practicum Special Education (N-9)	6

Additionally, students must complete the Early Childhood or Elementary Education certification programs as part of the Special Education Program.

School of Education

The following courses are required for students completing the major in Special Education after October 1, 1994.

	<i>Credits</i>
SE 202 Regular Education Initiative	3
SE 203 Social, Racial, and Linguistics Backgrounds of Special Needs Learners	3
SE 302 Principles and Application of Behavioral Management for the Special Needs Learner	3
SE 303 Principles and Procedures of Assessment of Special Needs Learners	3
SE 402 Children with Reading Disabilities: Diagnosis and Teaching Strategies	3
SE 403 Curriculum Development and Implementation for the Special Needs Learner	3
SE 404 Student Teaching Practicum: Mainstream Programs	6
SE 405 Student Teaching Practicum: Special Education Programs	6

Minor in Special Education

- SE 211 The Special Needs Learner in the Preschool
or
SE 212 The Special Needs Learner in the Elementary
School
or
SE 213 The Special Needs Learner in the Middle
School
or
SE 214 The Special Needs Learner in the High School
SE 317 Teaching Strategies in Mainstreamed Programs
SE 420 Strategies for Individual Educational
Programming

Three courses from the following:

- SE 400 The Culturally Different Child with Special
Needs
SE 435 Behavior Interventions in Special Education
SE 436 Consulting Skills for Special Educators
SE 438 Career Education for Special Needs Learners
SE 439 Diagnostic Techniques for Special Educators

Either:

- SE 498 Internship in Special Education
or
SE 499 Directed Study in Special Education

Graduate Programs

Master of Education in Special Education

The Department of Special Education offers several programs designed to meet the needs of graduate students.

Certification Track

Certified classroom teachers interested in certification as a Teacher of School Age Children with Moderate Special Needs (N-9) and a master's degree in Special Education follow a program which has been designed in accordance with Massachusetts Department of Education standards. Since this program is designed for students who already possess a classroom teaching certificate, applicants must file the Graduate School's form "Documentation of Certification Status." Students interested in this program should refer to Program A below.

Non-Certification Track

Students interested in a Master of Education in Special Education program which does not lead to certification should refer to Program B below.

Certificate of Advanced Graduate Study (CAGS)

Emphasis on Special Education

Students who have already earned a master's degree and who hold full certification in special education and who wish to study special education as part of a Certificate of Advanced Graduate Study (CAGS) in Education program should refer to Program C below.

Program A

For students certified as classroom teachers who wish to be certified as Teachers of School Age Children with Moderate Special Needs (N-9) and who wish to earn a Master's Degree in Special Education.

Graduate students must complete this certification program by August 1994 in order to be eligible for institutional endorsement by Bridgewater State College. Graduate students seeking professional certification must consult the section of this catalog entitled *School of Education* for information pertaining to changes in the *State Regulations for the Certification of Educational Personnel* and important institutional deadlines.

IMPORTANT: Students who will not complete the program by August, 1994, must meet with their adviser and plan an appropriate program that will lead to provisional and full certification. The adviser has specific course sequences to assist you in completing the program.

All accepted students must enroll under the direction of their adviser in *GP 501 Graduate Program Planning*, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog.

SE 510 Exceptional Children in the Schools is a prerequisite for all other courses in the program.

Required Courses in Special Education: Credits

- SE 510 (G) Exceptional Children in the Schools 3
- SE 400 (G) The Culturally Different Child with Special Needs
- or
- SE 540 (G) Contemporary Issues and Mandates in Bilingual Special Education 3
- SE 420 (G) Strategies for Individual Educational Programming 3
- SE 435 (G) Behavior Interventions in Special Education
- or
- SE 542 (G) Behavior Interventions in Bilingual Special Education 3
- SE 439 (G) Diagnostic Techniques for Special Educators
- or
- SE 541 (G) Non-Discriminatory Assessment I . . . 3
- SE 517 (G) Thought and Language Skills of Special Needs Learners 3

- Two electives in special education appropriate to the background and needs of the student and approved by the adviser. (Students completing a concentration in bilingual special education must complete SE 544 and SE 546) 6
- SE 591/592 (G) Practicum or Internship - Special Education (N-9)

or
SE 548/549 (G) Special Education Practicum or Internship (Working with Bilingual Children) 6

Sub-total: 30 graduate credits

Upon successful completion of the above sequence, the student will be eligible to apply for certification in Massachusetts as an N-9 Moderate Special Needs Teacher.

ADDITIONAL M.ED. REQUIREMENTS:

- SE 513 (G) Research and Seminar in Special Education 3
- ED 520 (G) Psychological Foundations of Education 3

Sub-total: 6 graduate credits

Total: minimum of 36 graduate credits

Students completing a concentration in bilingual special education should consult the department regarding additional course requirements.

Program B

For graduate students interested in Special Education who wish to earn a master's degree (non-certification track) in Special Education. The program does not lead to certification as a Teacher of School Age Children with Moderate Special Needs.

All accepted students must enroll under the direction of their adviser in *GP 501 Graduate Program Planning*, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog.

SE 510 Exceptional Children in the Schools is a prerequisite for all other courses in the program.

Required Courses: Credits

- SE 510 (G) Exceptional Children in the Schools 3

School of Education

- SE 400 (G) The Culturally Different Child with Special Needs or SE 540 3
- SE 420 (G) Strategies for Individual Educational Programming 3
- SE 435 (G) Behavior Interventions in Special Education or SE 542 3
- Students not holding or seeking certification in Special Education must also complete an appropriate practice experience through SE 503 (G) Directed Study 3

Sub-total: 12-15 graduate credits

- SE 513 (G) Research and Seminar in Special Education 3
- ED 520 (G) Psychological Foundations of Education 3
- Program Electives: Courses approved by the adviser based upon the student's background and objectives. It should be noted that students without considerable experience in special education will take a number of their electives in the special education area . . 15-18

Total: minimum of 36 graduate credits

Concentration in Bilingual Special Education

This concentration will provide educators with knowledge and skills in the area of bilingual special education. It will not lead to additional state or national certification.

Required courses: Credits

- GC 500 Research and Evaluation 3
- ED 520 Psychological Foundations of Education 3
- SE 510 Exceptional Children in the Schools 3
- SE 420 Strategies for Individual Educational Programming 3
- SE 517 Thought and Language Skills of Special Needs Learners 3
- SE 540 Contemporary Issues and Mandates in Bilingual and Special Education 3
- SE 542 Behavior Interventions in Bilingual Special Education 3
- SE 544 Language Development in Bilingualism . . 3
- SE 546 Strategies and Techniques for Adapting Bilingual Resources and Materials for the Special Needs Learner 3
- or
- SE 547 Multiple Roles for Bilingual Teachers of Moderate Special Needs Children . . . 3
- SE 503 Directed Study (Field experience with bilingual special needs students) 3
- SE 513 Research and Seminar in Special Education 3

- One elective in bilingual special education 3

Total: minimum of 36 graduate credits

Concentration in Mainstreaming Vocational Special Needs Students

This concentration will provide educators with knowledge and skills relative to mainstreaming special needs students in a vocational school setting. It will not lead to additional certification.

Required courses: Credits

- GC 500 Research and Evaluation 3
- ED 520 Psychological Foundations of Education . . 3
- SE 510 Exceptional Children in the Schools 3
- SE 400 The Culturally Different Child with Special Needs 3
- SE 420 Strategies for Individual Educational Programming 3
- SE 428 Rehabilitation and Special Education 3
- SE 435 Behavior Intervention in Special Education 3
- SE 438 Career Education for Special Needs Learners 3
- SE 440 Identification, Assessment & Development of Individualized Educational Programs (I.E.P.) for Vocational Education 3
- SE 441 Strategies & Methods for Special Needs Students in Vocational Education 3
- SE 503 Directed Study (Field experience involving mainstreamed vocational special needs children) 3
- SE 513 Research and Seminar in Special Education 3

Total: minimum of 36 credits

Program C

For students who have already earned a master's degree and are fully certified in special education and who wish to study special education as part of a Certificate of Advanced Graduate Study (CAGS) in Education program.

All accepted students must enroll under the direction of their adviser in *GP 501 Graduate Program Planning*, which is described under "Graduate Advisers and Program Planning" in the *Graduate School* section of this catalog.

Students who wish to focus on special education within their CAGS program work closely with their special education adviser and pursue a course of study which meets their academic and professional objectives. Specific information is available from the Department of Special Education.

ED 570 CAGS Seminar must be taken prior to acceptance to the CAGS program.



School of Education

Course Offerings*

SE 202 Regular Education Initiative: Mainstreaming the Special Needs Learner into the Regular Classroom (3 crs.)

This course will identify students' different learning styles and thinking skills. Federal and State law mandates for identifying and servicing mild and moderate special needs in the least restrictive environment will be discussed. Curriculum planning, as well as instructional techniques and strategies will be analyzed. Pre-practicum monitored field based experiences required; to be completed at the level of certificate sought: N-9, 5-12.

SE 203 Social, Racial and Linguistic Backgrounds of Special Needs Learners (3 crs.)

This course will investigate theories of typical and atypical growth and development. It will sensitize the student to the cultural, social and linguistic viewpoints of minority and bilingual learners and stress the ability to communicate with parents and participate on interdisciplinary teams. Prepracticum monitored field based experience required at the level of certificate sought: N-9, 5-12. (Prerequisite: SE 202)

SE 211 The Special Needs Learner in the Preschool (3 crs.)

This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of three field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the pre-school level. *Either semester*

SE 212 The Special Needs Learner in the Elementary School (3 crs.)

This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of three field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the elementary level. *Either semester*

SE 213 The Special Needs Learner in the Middle School (3 crs.)

This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of three field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the middle school level. *Either semester*

SE 214 The Special Needs Learner in the High School (3 crs.)

This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of three field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the high school level. *Either semester*

SE 302 Principles and Application of Behavioral Management for the Special Needs Learner (3 crs.)

This course will focus on basic principles, models and techniques for effective individual and classroom management in various educational environments. Pre-practicum field based experiences required at the level of certificate sought: N-9, 5-12. (Prerequisite: SE 203 or consent of instructor)

SE 303 Principles and Procedures of Assessment of Special Needs Learners (3 crs.)

This course will provide students with the ability to assess educational needs of special learners. Emphasis on consideration of non-discriminatory procedures appropriate to social, racial and linguistic differences. Strategies for modifying teaching based on evaluation results. Pre-practicum monitored field based experiences required at the level of certificate sought: N-9, 5-12. (Prerequisite: SE 203 or consent of instructor)

SE 317 Teaching Strategies in Mainstreamed Programs (3 crs.)

This course will enable the student to identify appropriate strategies to effectively educate special needs learners in regular classroom settings. It will provide the bridge between the principles of mainstreaming and its educational implementation by highlighting instructional strategies and curriculum adaptations that are possible within the regular classroom. A field experience is involved. (Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214) *Either semester*

SE 400 The Culturally Different Child with Special Needs (3 crs.)

This course will enable the student to develop the necessary competencies for teaching special needs children who are culturally and/or linguistically different. The course will combine psychological, linguistic, anthropological and educational findings with practical guidelines and strategies for instruction. (Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510) *Either semester*

SE 402 Children with Reading Disability: Diagnosis and Teaching Strategies (3 crs.)

This course will investigate the etiology of reading disabilities: physical, cultural and environmental. Early literacy, diverse modes of instruction and correlation to whole language programs will be analyzed. Specific teaching programs and strategies will be emphasized. Pre-practicum monitored field based experiences required at the level of certificate sought: N-9, 5-12. (Prerequisite: SE 203 or consent of instructor)

SE 403 Curriculum Development and Implementation for Special Needs Learners (3 crs.)

This course enables the student to design and implement appropriate Individual Educational Plans (IEP) under existing Federal and State Laws. Emphasis is placed on strategies and techniques which promote the academic, social, emotional, vocational and cultural needs of the special needs learner within a variety of instructional environments. Pre-practicum monitored field based experiences required, at the level of certificate sought: N-9, 5-12. (Prerequisite: SE 202 or consent of instructor)

*See pages 75-76 for general information regarding course offerings.

SE 404 Student Teaching Practicum: Mainstreamed Programs (6 crs.)

Practicum involves a minimum of one hundred fifty (150) hours of observation, assisting and full time teaching, with a minimum of one hundred thirty-five (135) hours in direct instructional responsibilities in a regular classroom in which special needs students are integrated. This practicum is done at the level of certificate sought, under a qualified cooperating practitioner and a college supervisor. *(Prerequisite: completion of six required special education courses.)*

SE 405 Student Teaching Practicum: Special Education Program (6 crs.)

Program involves a minimum of one hundred fifty (150) hours of observation, assisting and full time teaching, with a minimum of one hundred thirty-five (135) hours in direct instructional responsibilities in programs for moderate special needs students. This practicum is done at the level of certification sought, under a qualified cooperating teacher and college supervisor. *(Prerequisites: completion of six required special education courses)*

SE 415 Methods and Materials for the Academically Talented (3 crs.)

Emphasis is placed on the identification and placement of gifted pupils in our schools and the related program, enrichment activities, creative development, method and materials, modified curriculum, administration, motivation and treatment of underachievement. *(Prerequisite: PY 100) Offered primarily in the evening*

SE 420 Strategies for Individual Educational Programming (3 crs.)

This course is designed to provide students with a comprehensive study of how to evolve and implement appropriate individual education programs (IEP's) consistent with special education laws, regulations, procedures, and assessment of data. Major alternative instructional strategies with emphasis on the diagnostic-prescriptive model will be addressed in the context of a resource room. *(Prerequisite: PY 100; SE 211 or SE 212 or SE 213 or SE 214 or SE 510) Spring semester*

SE 428 Rehabilitation and Special Education (3 crs.)

Review of all of the procedures and processes of helping the mentally retarded, the physically handicapped, the emotionally disturbed, and the multi-handicapped through the medium of rehabilitation services. *(Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510) Offered in the evening*

SE 435 Behavior Interventions in Special Education (3 crs.)

This course will focus on the background, basic principles and techniques necessary for effective development of behavior with special needs students. Emphasis will be placed on behavioral procedures that have been found effective for individual and classroom use, including the ability to systematically observe and record student behavior. Other interventions and their applications to special education settings will also be considered. *(Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510) Spring semester*

SE 436 Consulting Skills for Special Educators (3 crs.)

This course emphasizes the development of consulting and

training skills of the special educator. This will include a survey of the origins and dynamics of consulting techniques which will result in the student being able to work in a variety of settings. *(Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510) Spring semester*

SE 438 Career Education for Special Needs Learners (3 crs.)

This course will assist in preparing special educators to understand career educational needs of special needs learners. Students will develop skills in appropriate objective writing and curriculum design in the area of career education for special needs learners. *(Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510) Spring semester*

SE 439 Diagnostic Techniques for Special Educators (3 crs.)

This course will prepare students to administer, analyze and interpret standardized tests which are applicable in special needs settings. Consideration will be given to assessing instructional needs appropriate to the age, sex, developmental stage, social, racial and linguistic background of special needs learners. *(Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510) Spring semester*

SE 440 Identification, Assessment & Development of Individualized Educational Programs (I.E.P.) For Vocational Education (3 crs.)

The purpose of this course is to identify problems special needs learners may encounter in a vocational education setting. The role and responsibilities of vocational educators in developing individualized educational programs will be covered. Identification and assessment techniques will be thoroughly explored. *(Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510) Offered in the evening*

SE 441 Strategies & Methods for Special Needs Students in Vocational Education (3 crs.)

The goal of this course is to enable the vocational educator to develop competencies in planning and implementing instruction for special needs students in vocational education classes. Techniques for modifying curriculum materials, curriculum content, teaching strategies and the physical environment will be addressed. *(Prerequisite: SE 438) Offered in the evening*

SE 460 Topics in Special Education (3 crs.)

This course is designed for students who desire to study selected topics in this field; it will allow for timely and relevant information to be explored. Topic changes each semester. *(Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510)*

SE 491 Student Teaching Practicum (N-9) (7.5 crs.)

Practicum involves full-time teaching in the role for one quarter under qualified practitioner and college supervisor or a minimum of 150 clock hours in the role for one semester under qualified practitioner and college supervisor. *(Prerequisite: unique program guidelines and prerequisites available from department chairperson and/or adviser) Either semester*

School of Education

SE 498 Internship in Special Education (3-15 crs.)

Off-campus experiences in areas related to expanding the student's background in Special Education. In-depth exposure to such areas as rehabilitation programs, sheltered workshops, day care centers, hospital and institutional programs. (*Prerequisite: consent of the department; formal application required*) Either semester

SE 499 Directed Study in Special Education (1-3 crs.)

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the department; formal application required*) Either semester

Other Approved Courses:

SE 418 Etiology, Dynamics and Treatment of Children with Behavioral Needs

SE 422 Teaching Strategies for Severe Special Needs

SE 429 Workshop in Special Education

SE 430 Workshop in Adult Special Education

SE 502 Research (credit to be arranged)

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

SE 503 Directed Study (credit to be arranged)

Designed for the graduate student who desires to study selected topics in a specific field. For details, consult the paragraph entitled "Independent Study" in the *Graduate School* section of this catalog.

SE 504 Applied Curriculum Development for Learners with Special Needs: N-9 (3 crs.)

This course will cover alternative strategies, techniques and materials to promote successful learning of the learner with special needs at the N-9 level. Emphasis will be on the areas of reading, mathematics and language arts; other areas will be considered. Field experiences will be included. (*Prerequisites: provisional certification in special education*)

SE 505 Applied Curriculum Development for Learners with Special Needs 5-12 (3 crs.)

This course will cover alternative strategies, techniques and materials to promote successful learning of the learner with special needs at the 5-12 level. Emphasis will be on the areas of reading, mathematics and language arts; other areas will be considered. Field experiences will be included. (*Prerequisites: provisional certification in special education*)

SE 510 Exceptional Children in the Schools (3 crs.)

An orientation to all aspects of education pertaining to special needs children. Emphasis will be on educational characteristics of each area of exceptionality and the new role of special education in the schools. Chapter 766 and P.L. 94-142 will be included.

SE 512 Organization and Administration of Special Education (3 crs.)

A comprehensive study of the psychological diagnosis, the personnel, the curriculum, the facilities, and the pupil services in an effective Special Education program. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 513 Research and Seminar in Special Education (3 crs.)

A careful research to help determine changes in this field so that improved services and techniques might be realized. (*Prerequisite: at least 30 credits toward the M.Ed. in special education*)

SE 514 New Education Policies for Children with Special Needs (3 crs.)

The legal basis for the education of children with special needs to help them become accepted, productive and social members of our society. Integration, assessment, delabelization, and involvement declare the real responsibility of all parents/guardians, of all educators, and of all the American public. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 515 Teacher Orientation to Learning Disabilities (3 crs.)

Acquaint in-service teachers with current statistics concerning children with Moderate Special Needs and encourage appreciation of the wide spectrum of difficulties these children have. Diagnosis and evaluation will be studied in conjunction with the fields of perceptual handicaps, physiology, neurology, and psychology. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 516 Applied Collaborative Strategies (3 crs.)

This course will cover alternative strategies, techniques and materials to promote successful learning of the learner with special needs at the 5-12 level. Emphasis will be on the areas of reading, mathematics and language arts; other areas will be considered. Field experiences will be included. (*Prerequisites: provisional certification in special education*)

SE 517 Thought and Language Skills of Special Needs Learners (3 crs.)

Classroom techniques and strategies for the analysis and diagnosis of language/learning dysfunctions. Emphasis will be on the development of a total language curriculum appropriate for remediation within special and mainstreamed programs. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 522 The Inclusion Classroom: Philosophy and Implementation (3 crs.)

This course will enable the student to identify and apply appropriate strategies, techniques and curriculum adaptations to promote success for learners with special need in the regular classroom. Consideration will be given to the philosophical and legal considerations for inclusion/mainstreaming. Field experiences will be required. (*Prerequisites: SE 510 or equivalent*)

SE 530 Assessment Procedures in Special Education (3 crs.)

This course will build on the knowledge of individual and different learning styles and thinking skills. Curriculum planning and instructional techniques will be discussed and developed. Strategies for maximizing consulting and collaborative team efforts will be covered through discussion, research, role playing

and interviews. Field experiences will be included. (*Prerequisite: provisional certification in special education*)

SE 536 Development of Auditory and Visual Perceptual Skills in Young Children (3 crs.)

Development of vision and audition as part of a sensory-action system with stress on the interaction between the functional and clinical aspects. Considerable time will be devoted to the recognition of perceptual skills and classroom problems involved in learning and learning difficulties. (*Prerequisite: SE 515 or consent of instructor*)

SE 540 Contemporary Issues and Mandates in Bilingual and Special Education (3 crs.)

Skills will be developed for identifying "special needs" relative to educating children from minority groups using a case study approach. Emphasis will be on the laws (Chapter 766, P.L. 94-142) Lau Guidelines, Chapter 71A, Section 636, Section 504 of P.L. 93-112 and their implications for programming. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 541 Non-Discriminatory Assessment I (3 crs.)

Skills will be developed for understanding the distinction between cultural differences and true disabilities. Emphasis will be on the linguistic and cultural biases of existing instruments and procedures and how to interpret test data, behavioral observations and informal techniques. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 542 Behavior Interventions in Bilingual Special Education (3 crs.)

Skills will be developed for understanding how cultural differences affect behavior. The models of behavioral management will include positive peer culture, tribal orientation, cultural symbols, social relations in the classroom, and multicultural techniques in addition to the theories of Erikson, Maslow, and Skinner, and other psychological and cognitive models. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 543 Non-Discriminatory Assessment II (3 crs.)

Case studies will be utilized for sharing and interpreting test data to other teachers, administrators, parents and consultants as well as including the prescribing of instructional programs from the test data. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510; SE 541*)

SE 544 Language Development and Bilingualism (3 crs.)

Skills will be developed for identifying dominance and language proficiency, understanding theories of first and second language learning, relating methods and theories on reading to ESL materials and identifying biases and deficiencies in existing curriculum for linguistic and cultural minority students. Emphasis will be on the effect of culture and language differences on speech and language development. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 545 Individual Education Planning in Bilingual Program Development and Instructional Alternatives (3 crs.)

Using a case study approach before writing an IEP, identifying child's strengths, weaknesses, learning style, general and specific behavioral goals, emotional, cultural constraints, and the criteria

for moving to least restrictive environment, with an emphasis on preventing bilingual children from being referred to special education programs by identifying inadequate services for bilingual children and advocating for change under the mandates of Chapter 766 and Public Law 94-142. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 546 Strategies and Techniques for Adapting Bilingual Resources and Materials for the Special Needs Learner (3 crs.)

Skills will be developed for organizing, planning, teaching and evaluating materials and programs for cultural/racial/linguistic biases and stereotyping, but with an additional focus on sensitivity to bilingualism and biculturalism. Emphasis will be on developing appropriate materials and strategies for meeting the needs of bilingual children in the classroom, the resource room, or least restrictive environment. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 547 Multiple Roles for Bilingual Teachers of Moderate Special Needs Children (3 crs.)

Skills will be developed for the many roles a change-agent might function in, such as educators, consultants, advocates, liaisons, counselors, advisers and trainers. Emphasis will be on the major role of the Bilingual Special Educator as a change-agent in the school and community to reduce racial discrimination in regular and special education. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

SE 548 Special Education Practicum (Working with Bilingual Children) (6 crs.)

Practicum involves full-time teaching in the role for one quarter under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for one semester under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for two consecutive semesters under qualified practitioner and college supervisor. (*Prerequisite: unique program guidelines and prerequisites available from adviser*)

SE 549 Special Education Internship (Working with Bilingual Children) (6 crs.)

Candidates who do not hold Massachusetts certification as Teachers of School Age Children with Moderate Special Needs and who are employed less than full time, but at least 1/5 time, in the role and at the level of the certificate desired, must complete a 300 clock hour internship within one calendar year. Students must register with the program coordinator by May 15th for the fall semester or by October 15th for the spring semester internship. (*Prerequisite: unique program guidelines and prerequisites available from adviser*)

SE 550 Research Seminar in Special Education (3 crs.) (to replace SE 513)

This course is designed to critically examine current issues in special education. Through this approach participants will focus on pertinent methodologies that influence research in special education, and will conduct an appropriate research project. (*Prerequisites: provisional certification in special education; concurrent enrollment in the clinical experience*)

School of Education

SE 582 Computers and the Special Needs Child (3 crs.)

This course demonstrates the unique impact computers can have on the education of students with a wide spectrum of special needs. Students review psychological perspectives on special education and computer techniques as tools to aid that education. Moderate and low-incidence severe handicaps are considered along with milder school disabilities. *(Prerequisite: teaching certificate)*

SE 590 Teaching the Gifted Child (3 crs.)

Meeting the special needs of gifted children with a three-stage teacher training model allowing students to design curriculum which will develop critical and creative thought. Working in small groups, students will shape their ideas to address the special needs of the gifted in both mainstream and separate program settings. *(Prerequisite: SE 415 or consent of the instructor)*

SE 591 Practicum - Special Education (N-9) (6 crs.)

Practicum involves full-time teaching in the role for one quarter under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for one semester under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for two consecutive semesters under qualified practitioner and college supervisor. *(Prerequisite: unique program guidelines and prerequisites available from adviser)*

SE 592 Internship - Special Education (N-9) (6 crs.)

Candidates who do not hold Massachusetts certification as Teachers of School Age Children with Moderate Special Needs and who are employed less than full time, but at least 1/5 time, in the role and at the level of the certificate desired, must complete a 300 clock hour internship within one calendar year. Students must register with the program coordinator by May 15th for the fall semester or by October 15th for the spring semester internship. *(Prerequisite: unique program guidelines and prerequisites available from adviser)*



Introductory College Skills

The courses in Introductory College Skills listed below are designed to strengthen those skills most essential to effective learning, both in college and throughout life. The program is based on the college's commitment to provide students with every opportunity to build upon strengths they have while correcting any deficiencies.

Students may be assigned to a class, or classes, containing these separate components as a result of a review of the students' high school record, SAT scores, and performance on various placement examinations generally given during Freshman Orientation. A student may also request this assistance, which the college is pleased to provide.

The course or courses will be graded on a pass/fail basis and will not be calculated in the student's cumulative quality point average. Students assigned to any component of the course must complete that component successfully before attempting any regular course in that area. The credit earned in any Introductory College Skills course may not be used to satisfy General Education Requirements nor may it be applied toward the minimum number of credits required for graduation in any major.

Course Offerings*

FS 100 Introductory College Skills: Intrusive Advising (1 cr.)
A specialized learning/advising program for freshmen offered by the Office of Academic Advising conducted in a small group setting. In this process students are encouraged to explore their learning styles, possible career interests and academic goals in terms of the total college environment in a shared and supportive setting. The credit earned may not be used to satisfy the GER, nor may it be applied toward the minimum number of credits required for graduation in any major. *Either semester*

FS 101 Introductory College Skills: Writing (3 crs.)
This course will consist of an intensive review of basic communication skills, chiefly those of reading and writing. It does not satisfy the writing GER, nor may the credits be applied toward the minimum credits required for graduation by any major. *Either semester*

FS 102 Introductory College Skills: Mathematics (3 crs.)
This course is individualized, self-paced and competency based and covers the fundamental principles of arithmetic, algebra, and geometry including: signed numbers, whole numbers, fractions, decimals, percents, exponents, equations, inequalities, rational equations, geometry, and problem solving. This course does not satisfy the mathematics GER, nor may the credits be applied toward the minimum credits required for graduation by any major. *Either semester*

* See pages 75-76 for general information regarding course offerings.

Multidisciplinary and Pre-Professional Programs

American Studies Minor

Designed to complement the student's major, this minor program examines the development of American society and culture from several perspectives. It features a study of the United States through a combination of relevant courses in a variety of academic areas: history, literature, art and architecture, philosophy, religion, political science and others. Through this multidisciplinary focus, the minor encourages an integrated and inclusive sense of the American experience.

The area around Bridgewater is rich in library and museum resources for American studies. In addition to the holdings of Boston-area colleges and universities, there are the collections of the Massachusetts Historical Society, the Pilgrim Museum, Plimouth Plantation, the Whaling Museum in New Bedford, the Brockton Art Center, the Boston and Providence Athenaeums, the John Carter Brown Library and the Harris Collection at Brown University. Bridgewater itself has the Microbook Library of American Civilization and the PCMI humanities collection.

A student wishing to pursue a minor in American Studies will ordinarily be assigned an adviser from the American Studies Committee, and will be expected to take the following sequence of courses in the sophomore, junior and senior years:

Required Courses:

ID 220 Introduction to American Studies
ID 420 American Studies Seminar

Elective Courses: In consultation with an American Studies adviser, the student will choose a group of at least FOUR (4) additional courses in fields related to the program. Most likely these courses will be spread over the junior and seniors years. At least TWO (2) of these additional courses must be chosen from disciplines outside the student's major.

For further information, interested students should contact the Department of English.

Canadian Studies Minor

The minor has been developed as an area study in response to faculty, student and regional interest. The national origins of a large portion of the population of southeastern Massachusetts reflect strong Canadian ties from both the French and English communities.

Multidisciplinary and Pre-Professional Programs

The program is designed to supplement and give a multi-cultural dimension to one's major by an in-depth study of our northern neighbor. The study is presented in the following academic areas: history, literature (English and French), geography, music, economics and political science.

Students may enter the Canadian Studies minor during the sophomore or junior year and will be assigned an adviser in their major fields, usually a member of the College Council for Canadian Studies.

In addition to **ID 200, An Introduction to Canadian Studies**, students in the program should select courses from those listed below.

- A. Three courses with one from each area:
 1. Area of literature
 EN 283 Major Canadian Writers in English I
 EN 284 Major Canadian Writers in English II
 LF 261 Introduction to the Civilization and Language of French Canada
 2. Area of history
 HI 375 Canadian History to Confederation
 HI 376 Canadian History since Confederation
 3. Area of geography or political science
 GS 386 Geography of Canada
 PO 386 Canadian Government
- B. Two additional courses selected from the following list:
 - LF 261 Introduction to the Civilization and Language of French Canada
 - GS 386 Geography of Canada
 - HI 375 Canadian History to Confederation
 - PO 386 Canadian Government
 - MU 368 Folk Music of Canada
- C. One additional course may be selected from courses in Group B or from the following:
 - HI 475 History of Canadian-American Relations
 - LF 211 Twentieth-Century French Canadian Writers
 - LF 222 Introduction to French-Canadian Literature

Total of 18 credit hours.

Students in the minor are encouraged to have some familiarity with French as their language.

For further details contact Professor Anthony Cicerone of the Department of Economics.

Chemistry-Geology Major

A major in Chemistry-Geology is offered jointly by the Department of Chemical Sciences and the Department of Earth Sciences and Geography. This program is designed to prepare students for graduate school and professional employment in geo-chemistry and geology. Careers in these fields may involve petroleum, mineral and groundwater exploration, or research in geochronology, mineralogy, crystallography and oceanography. This major is particularly suited to students interested in chemical or geological oceanography. The program is flexible in that it allows the student to specialize in a variety of areas by suitable choice of electives.

Chemistry-Geology majors are required to take the following courses: CH 141-142 Chemical Principles I-II (or CH 131-132 General Chemistry I-II); ES 100 Physical Geology, ES 101 Historical Geology, ES 372 Mineralogy and ES 496 Seminar in Geology. In addition to the above requirements, majors must elect a minimum of two additional semesters of chemistry, two semesters of physics, and two semesters of mathematics. In addition to these electives the student must elect a minimum of six hours of chemistry or earth sciences or mathematics or physics which have been approved by the student's adviser.

The Chemistry-Geology major at Bridgewater State College is recognized by the New England Regional Student Program as an undergraduate four-year degree opportunity for residents of New England. Students who are legal residents of Connecticut, Maine, New Hampshire, Rhode Island, and Vermont and are accepted for study in this major will pay the in-state tuition rate plus surcharge tuition.

Bridgewater State College

Dance Minor

The dance minor is an interdisciplinary program in the Theatre Arts and Physical Education programs. The objective is to give a solid liberal arts experience in the art of dance. The program includes the study of techniques of various styles of dance, dance history and theory, choreography and production.

Courses include:

CT/PE 255 Creative Dance I
CT/PE 256 Creative Dance II
CT/PE 251 Dance History
CT/PE 155 Dance Practicum (two semesters)
CT/PE 357 Dance Production Theory
CT/PE 358 Dance Production Techniques
PE 154 Ballet I

Four credits in the following:

PE 153 Jazz I
PE 258 Modern Dance Technique
PE 259 Dance Repertory
PE 262 Modern Dance II
PE 243 Ballet II
PE 253 Jazz II

Choose one:

PE 161 Folk Dance
PE 164 Square Dance

MU 160 Music: A Listening Approach is recommended but not required.

Please note that only six of the seven credits in activity courses count toward graduation for non-Physical Education majors.

Health Resources Management Minor

Students from relevant liberal arts and other related programs may elect this minor to develop the skills and background knowledge to gain employment at the entry level of health care delivery management. This minor is most appropriate for students in the Social Sciences, Social Work, Physical Education, Communication Arts, Management Science, and other human service oriented professions.

Required Core:

HE 102 Health Science
HE/SW 303 Interdisciplinary Approaches to the
Delivery of Health Services
HE 474 Community Health
AC 240 Accounting I
MG 130 Principles of Management
MG 140 Human Resources Management

Electives (choose one):

HE 401 Human Sexuality
HE 405 Drugs in Society
HE 471 Nutrition
HE 477 Environmental Health
AC 241 Accounting II
MG 200 Marketing Principles
MG 375 Personnel Development
MG 385 Managerial Finance

Oceanography

Courses related to oceanography are offered as a cooperative effort of the Departments of Biological Sciences, Chemical Sciences, Earth Sciences and Geography, and Physics. This emphasis is designed to prepare students for graduate studies in oceanography.

Most graduate schools of oceanography require an undergraduate major in biology, chemistry, earth sciences or physics. All students interested in an oceanography program should major in one of these disciplines. Graduate schools of oceanography expect students to include most of the following courses (or comparable ones) in their undergraduate programs: Calculus I and II, General Chemistry I and II, Quantitative Analysis, General Physics I and II, Animal Morphology, Plant Morphology, Physical Geology, Biological Oceanography and Physical Oceanography.

Multidisciplinary and Pre-Professional Programs

These courses, together with one of the majors indicated above, provide the basic foundation for further study in one of the four principal branches of oceanography, i.e.: biological oceanography, chemical oceanography, geological oceanography, and physical oceanography. A student who is interested in oceanography should consult both his/her major adviser and one of the oceanography advisers before registering for courses in his/her freshman year or as soon as possible thereafter. Oceanography advisers are: Dr. Robert Boutilier (Earth Sciences); Dr. Henry Daley (Chemistry); Dr. John Jahoda (Biology).

Pre-Medical, Pre-Dental, Pre-Veterinary

The Department of Biological Sciences can advise students interested in pre-medical, pre-dental and other allied health areas such as physical therapy, physician's assistant, podiatry and chiropractic professions of recommended courses for their areas, professional schools to which they may want to apply and the minimum requirements for admission to these schools. Pertinent information concerning entrance exams and resume writing is also available. Interested students should consult with Dr. Walter Morin in the Department of Biological Sciences.

Pre-Engineering

Pre-professional training for students planning to enter engineering schools is provided by Bridgewater State College.

Engineering schools expect prospective students to have demonstrated competency in areas such as mathematics, physics, chemistry, and computer science.

Students who are interested in engineering should consult with Dr. Richard Calusdian in the Department of Physics.

Pre-Law

Advising for students considering entering law school after graduation is provided by Bridgewater State College. Law schools are generally seeking students with strong academic liberal arts backgrounds who have demonstrated a high degree of competence in the ability to write with clarity, reason logically and analyze complex ideas. While law students therefore come from a variety of majors, it is useful to have a balanced curriculum with some preparation in history, English, government and philosophy. Students interested in a legal career should consult with Professor Pauline Harrington of the Department of Political Science.

Program in Scientific and Technical Illustration

This program is offered as a cooperative effort of the School of Arts and Sciences and the Department of Art. It provides a basis for careers in scientific and technical illustrations. Students interested in this program should major in either art, one of the natural sciences or mathematics. All students in this program are expected to take the following courses: AR 130 Two-Dimensional Design, AR 125 Drawing I, AR 230 Painting I, AR 240 Sculpture I, AR 225 Drawing II, AR 499 (1 cr.) Directed Study. Students majoring in art must minor in one of the natural sciences or mathematics. It is strongly recommended that all students in this program take at least one course in each of the natural sciences and mathematics. In addition to their regular advisers (majors and minors), students are encouraged to consult with Dr. Stephen Smalley of the Department of Art.

Bridgewater State College

Public Relations Minor

This public relations minor is offered as a cooperative effort of the Departments of Speech Communication, Theatre Arts and Communication Disorders, Management Science and Aviation Science, and English. It provides an opportunity for students to acquire knowledge and skills germane to public relations practice. Students take courses in management, advertising, public relations, marketing, and business writing, or elect presentational skills courses, for a total of 21 credit hours.

Required Courses:

CC 301 Managing Messages: Introduction to Public Relations

CC 391 Public Relations Seminar

MG 130 Principles of Management

MG 200 Marketing Principles

MG 324 Advertising

Elective Courses:

Choose one:

CC 250 Public Speaking

CC 315 Speech for Radio

CC 316 Speech for Television

CC 330 Business and Professional Communication

Choose one:

EC 101 Principles of Microeconomics

EN 202 Business Communication

Interested students should contact the department chairperson of the Department of Speech Communication, Theatre Arts and Communication Disorders, the Department of Management Science and Aviation Science, or the Department of English.

Radio and Television Operation and Production Minor

A minor in Radio/Television Production is offered for those students who have an active interest in the areas of radio and/or television. Practical application of the theories learned in class is an essential element of the program.

Interested students should contact the department chairperson of the Department of Speech Communication, Theatre Arts, and Communication Disorders.



Multidisciplinary and Pre-Professional Programs

Russian and East European Studies Minor

A multidisciplinary minor encompassing 18 credit hours to be selected from courses offered in the Departments of English, Foreign Languages, Earth Sciences and Geography, History, Political Science, and Economics. The major purpose of this minor is to provide students with a deeper understanding of the Eastern European Area (including Russia) and its culture.

Each student must achieve proficiency in the Russian Language (up to the intermediate level), but only six credits can be applied to the area program - or - any other Slavic language. Each requirement can be met by CLEP.

Three credits of each subject taken within the Slavic area studies can also be applied to student's major.

Students participating in the program are encouraged to go beyond the minimum requirements and take additional general education electives in this area.

Additional courses can be taken, with the approval of the Slavic Council, at other Massachusetts state colleges.

Each student who completes the program will be credited with a minor in the area, and in addition will receive "A Certificate of Completing Area Studies: Slavic."

The requirements for the minor include:

LR 151-152 Intermediate Russian I-II
HI 330 History of East-Central Europe since 1918
or
HI 334 Modern Russia to 1917
or
HI 439 History of the USSR
GS 380 Geography of Russia/C.I.S.

Select two of the following courses:

EC 320 Comparative Economic Systems
PO 275 Comparative Government
PO 383 Comparative Political Systems

For further details contact Dr. Chester Nowak of the Department of History.

Urban Affairs Minor

The college offers a multidisciplinary minor in urban affairs under the auspices of the earth sciences and geography, economics, history, political science, psychology, and sociology and anthropology departments. The primary purpose of this minor is to provide students with a broader understanding of and sensitivity to the complex problems facing the urban environment through the combined efforts of different disciplines at the college. The minor, through its internship program, is designed to provide students with an opportunity for direct contact and work in fields such as urban planning, urban government, social welfare, social psychology, and urban education.

Some examples of internships which are assigned according to the abilities, interests, and background of the student, and the current needs of the cooperating communities or agencies are:

Department of Earth Sciences and Geography:

City and regional planning; economic development; land use; environmental protection; transportation studies; cartography/drafting; business/bank locations and market studies.

Department of History:

Working with historical affairs commissions; assisting community organizations in oral history projects, and writing about local history.

School of Arts and Sciences:

Working in human services agencies; survey research in public institutions; work in community organizations and voluntary agencies.

Option A

Four out of the following seven courses:

AN 307 Urban Anthropology
EC 350 Urban Economic Problems and Policies
HI 447 History of the American City
PY 210 Applied Social Psychology
GS 353 Urban Geography
SO 306 Cities and People: Urban Sociology
PO 376 Municipal Government

Internship: (6) credits. (Equal to 8 weeks, full time or 16 weeks half time)

Bridgewater State College

Option B

Four out of the six courses listed under Option A, plus two courses from the list below:

GE 354 Field Methods in Urban Geography
HI 445 American Labor History
PO 277 American Government: State and Local
SO 212 Discrimination and Prejudice
499 Directed Study in individual participating departments

Courses taken to satisfy requirements of a major may not be counted in the minor. Students interested in this program are encouraged to take their general education electives in the area of minority studies.

Students interested in this program should contact:

1. Professor Glenn Miller, Department of Earth Sciences & Geography
2. Professor Lucille O'Connell, Department of History

Women's Studies Minor

Women's studies takes as its subject women in all fields of inquiry, past and present. The motive for women's studies is in part corrective. Courses are devised to address the exclusions from the traditional liberal arts curriculum that defined human nature and significant human achievement as male and neglected or undervalued areas of inquiry in which women excelled. In addition to compensating for past omissions and correcting misconceptions, women's studies is an academic discipline in its own right. Emerging as a discipline in the 1960's, women's studies has generated a distinguished body of published research and a number of scholarly organizations to foster research. The reference department of the Maxwell Library has prepared a bibliography for women's studies. Interested students should contact Professor Lois Poule of the Department of English.

Required Courses:

ID/WS 230 Introduction to Women's Studies
ID/WS 330 Issues and Perspectives in Women's Studies
ID/WS 430 Seminar: Research Theory and Methods in Women's Studies

Elective Courses:

Choose three from the following:

AH 308 Women in the Visual Arts
AN 208 Anthropology of Women
HI 451 Women in American History
ID 304 The Psychosocial Development of Women
PL 210 Liberation Ethics
PL 332 Philosophy and Feminist Thought
SO 330 Women's Roles: Sociology of Sex and Gender
SW 227 Policies of Discrimination Towards Women, Minorities and the Poor
SW 328 Women and Social Services

Multidisciplinary and Pre-Professional Programs

Interdisciplinary Course Offerings*

BH 560 Curricular Materials in the Behavioral Sciences (3 crs.)
New course books and other materials planned by national advisory groups of anthropologists, psychologists, and sociologists and produced through long-term projects funded by the National Science Foundation will be presented, with emphasis on clear, objective behavioral scientific materials recommended for immediate use in secondary schools.

BH 599 CAGS Seminar in Behavioral Sciences (3 crs.)
Designed to provide a broad conceptualization of the behavioral sciences, focusing on critical issues facing professionals in the field today.

HU 502 Research (credit to be arranged)
Original research undertaken by the graduate student in an area within the Humanities. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalog.

HU 503 Directed Study (credit to be arranged)
Designed for the graduate student who desires to study selected topics in the Humanities. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalog.

HU 599 CAGS Seminar in the Creative Arts (3 crs.)
Designed to provide a broad conceptualization of the creative arts, focusing on critical issues facing professionals in the field.

ID 200 Introduction to Canadian Studies (3 crs.)
An interdisciplinary course which acts as the initial course for the general student and for those wishing to pursue a track in Canadian Studies. The following areas are included: anthropology, art, economics, education, English, French, geography, government, history, music, religion, sociology and theatre. Satisfies the GER in Social Sciences. *Spring semester*

ID 211 History and Literature of Western Civilization (3 crs.)
A study of selected historical and literary documents which shaped and in turn were formed by the civilization of the West. The course will focus on the Classical, Medieval, and early Renaissance periods and will be taught by two instructors, one from the Department of History and one from the Department of English. Satisfies the GER in History or Literature. *(Prerequisite: Enrollment in All-College Honors and consent of the instructors)*

ID 220 Introduction to American Studies (3 crs.)
Sophomores should enroll in this interdisciplinary course which is the initial course for the minor in American Studies. The course aims to examine from several perspectives one problem or period in the American experience. The topic, to be announced before registration, changes from year to year. Disciplines involved include: English, history, art, philosophy, political science and others.

ID/WS 230 Introduction to Women's Studies (3 crs.)
An interdisciplinary approach to communicating the experience of being a woman. Through the study of such topics as language, gesture and movement, images, role models, sex roles, gender, biological and cultural conditioning, stereotyping, and discrimination, the course will explore the nature, accomplishment, and promise of women--as they have been seen and as they see themselves.

ID 240 Women in Sport (3 crs.)
This course investigates the sport-women relationship from a physiological, historical and socio-cultural perspective. In so doing, it examines images, attitudes and structures that affect the involvement of women in sport and exercise and restrict/enhance their personal and professional potential. *(Prerequisite: Three GER credits in Behavioral Science)*

ID 260 Quantitative Methods in Earth Sciences and Geography (3 crs.)
The application of descriptive and inferential statistical methods in dealing with problems or areal associations and spatial intersections in the earth sciences and geography. *(Prerequisite: GE 100 or ES 100, one year or more of mathematics, and consent of the instructor) Fall semester*

ID 304 The Psychosocial Development of Women (3 crs.)
This course will provide an introduction to "women's reality" in terms of current research on women's values and needs. The course will cover such topics as power and conflict, sexuality and intimacy, creativity, ethnicity and the effects of oppression as well as the emotional problems which appear to affect women, e.g. depression, eating disorders, etc. *(Prerequisite: consent of instructor)*

ID/WS 330 Issues and Perspectives in Women's Studies (3 crs.)
The purpose of the course is to explore in depth a subject incidentally treated in a department or traditional course. The subject will vary depending on the instructor but may be one of the following: women and health; managerial women; women in art; women and work; women in politics; biological determinism and cultural conditioning: race, sex, and gender; aesthetics and feminism; feminism and christianity; women in science; women's roles in primitive cultures; women in Latin America; images of women in media. May be taken twice. *(Prerequisite: ID/WS 230)*

ID 338-339 Honors Tutorial (3 crs. each semester)
Special topics of an interdisciplinary nature. Open to All-College Honors students at the junior and senior levels. Three hourly meetings weekly. *(Prerequisites: completion of three Honors Colloquia and attainment of an overall GPA of at least 3.3) ID 338 fall semester, ID 339 spring semester*

* See pages 75-76 for general information regarding course offerings.

Bridgewater State College

ID 420 American Studies Seminar (3 crs.)

Interdisciplinary topics, which change from year to year, will be developed in a small group, seminar setting. Juniors and seniors in the program will enroll in this seminar twice, studying two different topics. Total of 6 hours.

ID/WS 430 Seminar: Research Theory and Methods in Women's Studies (3 crs.)

To inquire into what it means to be a woman or a man, one must understand the various contexts in which to formulate definitions and make analyses. The seminar will present research techniques and theories of inquiry, examining assumptions in research, methods and conduct of inquiry, interpretation of data, publication and critical evaluation of research. Students will conduct their own research project having examined the current state of research in their disciplines. (*Prerequisite: ID/WS 230*)

ID 485 Honors Thesis (3 crs.)

Open to All-College Honors students. One-hour weekly meetings with the thesis director, normally a member of the student's major department, will culminate in an honors thesis. Whether the final version of the thesis qualifies the student to graduate with All-College Honors will be determined by the student's Ad Hoc All-College Honors Thesis Committee. May be repeated. (*Prerequisites: completion of three Honors Colloquia and attainment of an overall GPA of at least 3.3*) Either semester

NS 300 Science and the Impact of Technology (3 crs.)

A study of the interplay of science and technology, the environmental, social, and economic consequences of technology, the effect of technical change on society, the management and control of technology, and the nature of the technological decision-making process.

NS 400 Senior Interdisciplinary Seminar in Environmental Science (3 crs.)

Current environmental issues will be discussed and analyzed in detail from an interdisciplinary viewpoint. The importance of thorough analysis and planning in developing long-term solutions to environmental problems will be emphasized. Faculty with appropriate interdisciplinary backgrounds will participate. (*Prerequisite: an introductory course in environmental science or consent of the instructor*)

NS 411 Introduction to Medicine for the Non-physician (3 crs.)

A survey of human medicine. Topics selected from anatomy, physiology, medical embryology, radiology, diagnosis, laboratory medicine, pathology, treatment of disease, and disease prevention. (*Prerequisite: BI 102 (or equivalent) and a semester of a college-level course in chemistry or physics, or consent of the instructor*)

NS 514 Scientific Telecommunications (2-6 crs.)

An introduction to the uses of personal-computer based electronic telecommunication techniques and the application of these techniques to the sciences. The following topics will be considered: micro-computers, serial interfaces, modems, communications software, bulletin board software, communication protocols, message transfer, file transfer, text editing, microcomputer to mainframe, and scientific calculations. If the course is taken for more than 2.0 credits, a project will be required. (*Prerequisite: CH 512 or consent of the instructor*)

NS 525 Mathematical Applications to the Natural Sciences (3 crs.)

A series of lessons will be offered in which the application of mathematics to various areas of science will be offered. Guest speakers will present material from their area of expertise. Demonstrations of classroom presentation of the material will be given. (*Prerequisites: High School/Middle School Teacher of Mathematics or Sciences*)

NS 599 CAGS Seminar in Natural Sciences and Mathematics (3 crs.)

Designed to provide a broad conceptualization of the field, focusing on critical issues facing professionals in science and mathematics today.

SS 300 The Geography and History of Mexico (3 crs.)

The history of colonial New Spain and modern Mexico, focusing on the relationship of the physical environment to the culture of the indigenous population of the Spanish contributions in the development of the nation.

Army Reserve Training Corps

Army ROTC offers a program which provides Bridgewater students the opportunity to graduate as officers and serve in the U.S. Army, the Army National Guard, or the U.S. Army Reserve. Army ROTC enhances a student's education by providing unique leadership and management training, along with practical experience.

Army ROTC three- and two-year full-tuition scholar-ships are available for Bridgewater students. Each scholarship pays for college tuition and required educational fees, and provides a specified allowance for textbooks, supplies, and equipment. Each scholarship also includes a subsistence allowance of up to \$1,000 for every year the scholarship is in effect.

For further information, contact Captain Reginald S. Whitlock at the Department of Military Science at Stonehill College, North Easton, Massachusetts, (508) 230-1025 or 1365.

Multidisciplinary and Pre-Professional Programs

Air Force Reserve Officer Training Corps

Air Force (ROTC) is an educational program designed to give men and women the opportunity to become an Air Force officer while completing a bachelor's degree program. The Air Force ROTC program is designed to prepare you to assume positions of increasing responsibility and importance in the Air Force.

In addition, Air Force ROTC full and partial scholarships are available to students who qualify. During the junior and senior years, ROTC cadets are paid monthly stipends.

For further information contact Captain Alberto Moreno at Air Force ROTC, (617) 353-4705 (at Boston University).

Federal Aviation Administration

Federal Aviation Administration (FAA) Air Way Science Curriculum approval has been awarded to Bridgewater State College. Students who complete this curriculum, along with the requirements for a bachelor's degree in Aviation Science, qualify for preferential status for subsequent employment with the FAA.

Federal Aviation Administration Certification of Bridgewater State College as a Federal Air Regulation (FAR) Part 141 ground school allows students to complete all required ground school courses at the college as part of the aviation science curriculum and at no additional tuition.

For further information, see Professor William Annesley of the Department of Management Science and Aviation Science.



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President

A.B. (Bryn Mawr College); M.A. (University of Washington);
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Index

A

Academic Calendar	inside front cover
Academic Policies	
Undergraduate	54
Graduate	65
Academic Advising	14
Academic Programs	
Undergraduate	44
Graduate	61
Academic Progress	56
Academic Standing	
Undergraduate	34, 56
Graduate	66
Accounting	154, 164
Accreditation	1
Administration and Other College	
Offices	334
Admissions	
Undergraduate	29
Graduate	61
Advanced Placement Examination	35
Advanced Standing	34
Affirmative Action, Office of	22
Alumni Scholarship	43
American Studies Minor	322
Anthropology	215, 219
Arabic	134
Archaeology	216
Art, Department of	80
Arts and Sciences, School of	77
Assistantships, Graduate	43, 70
Athletics	18, 19
Attendance Policy	57
Auditing Courses	55, 58
Aviation Management	157
Aviation Science	156, 165

B

Bachelor's Degrees	44
Biochemistry	49
Biological Sciences, Department of	89
Board of Trustees	332
Business Programs	
(see Management Science)	153

C

Calendar	inside front cover
Campus	10
Canadian Studies Minor	322
CAPS (College Academic	
Program Sharing)	53
Career Planning and Placement	20
Certificate of Advanced	
Graduate Study (CAGS)	74
CAG5 in Behavioral Sciences	74
CAGS in Creative Arts	74
CAG5 in Natural Sciences and	
Mathematics	74
CAG5 in Education	246
Campus Center	11, 18
CART	13
Certificate Programs	10
Change of Major (undergraduate)	58
Change of Program (graduate)	66
Chemical Sciences, Department of	98
Chemistry/Geology	99, 323
Child Care Center	21
Chinese	134
Classification	56
CLEP (College Level Examination	
Program)	35, 59
Club Sports Programs	19
Clubs and Organizations	18, 19
College Entrance Examination	
Board Tests	30
Commencement	25, 53
Commonwealth Transfer Compact	32, 59
Comprehensive Examination	
(Graduate)	71
Computer Science	169
Concentrations	9, 45
Conduct	60
Consortia (see Cross-Registration)	
Correspondence	
Directory	364
Counseling Center	21
Counseling Program	290
Course Descriptions	75
Course Loads	
Undergraduate	57
Graduate	67

Course Numbering System	75
Credit, Undergraduate and Graduate	67
Credit, Transfer of	
Undergraduate	59
Graduate	67
Cross-Registration	53
Cultural Organizations	19
Cumulative Average	
(see GPA)	

D

Dance Minor	324
Dean's List	55
Declaration of Major	58
Declaration of Minor	59
Degree Applications	
Undergraduate	54
Graduate	71
Degree Requirements	
Bachelor of Arts	44
Bachelor of Science	44
Bachelor of Science in Education	44
Master of Arts	72
Master of Arts in Teaching	72
Master of Education	73
Master of Science	74
Directed Study	
Undergraduate	16, 51
Graduate (see Independent Study)	
Disabled Students	22
Dismissal, Academic	
Undergraduate	60
Graduate	66
Double Major	45
Drop/Add	57

E

Early Childhood Education	248
Early Decision	31
Earth Sciences and Geography,	
Department of	106
Economics, Department of	118
Education, School of	240
Educational Leadership and	
Administration	293

Bridgewater State College

Elementary and Early Childhood Education, Department of	248
Emeritus Faculty	356
Employment Opportunities	43
Energy and Environmental Resources Management	154
Engineering (see Pre-Engineering)	325
English, Department of	122
Enrichment Program	14
Events/Special Programs	24
Examinations (Graduate)	
Comprehensive	71
Preliminary	72
Research Proficiency	72
Exchange Programs	16, 19

F

Faculty	13, 345
Fees	37
Finance	154
Financial Aid	40
Flight Training	157
Food Services	21
Foreign Languages, Department of	131
French	131
Freshman Skills Course Offerings	321

G

General Education Requirements	47
General Management Concentration	154
Geography	107
Geography as a Social Science	115
Geology	109
German	136
GPA (Grade Point Average)	55, 56, 57
Grading System	
Undergraduate	55
Graduate	66
Graduate Admissions	63
Graduate Advisers and Program Planning	66
Graduate Policies and Procedures	66
Graduate Programs	10, 61
Graduate Program Requirements	72
Graduate Record Examination	65
Graduate School Office	61
Graduate School Tuition and Fees	37
Graduation Requirements,	
Undergraduate	54
Graduate	72
Graduation with Honors	16, 52, 55
Grants	40

H

Hall of Black Achievement	25
Health Resources Management Minor	324
Health Services	21, 35
History, Department of	140
Honors, Graduation	16, 52, 55
Honors Program	15, 51
Housing	27

I

Incomplete Grade	55
Independent Study	
Undergraduate	51
Graduate	70

Information Systems Management	155
Insurance	21
Intercollegiate Eligibility	59
Interdisciplinary Programs	322
International Affairs	16
International Students	22, 34
Internship	16, 51
Intramural Program	19
Introductory College Skills Courses	321
Italian	136

J

Japanese	136
----------	-----

L

Law (see Pre-Law)	325
Learning Resources	13
Leave of Absence	58
Legal Studies	197
Library, Clement C. Maxwell	10
Loans	40

M

Management and Aviation Sciences, Department of	153
Management Science	153
Major Programs	
Undergraduate	9, 44
Graduate	10, 61
Major Requirements,	
Undergraduate	45
Graduate	72
Marketing	155
Martin Luther King, Jr. Celebration	26
Mathematics and Computer Science, Department of	168
Mathematics Laboratory	14
Maxwell Library Staff	343
Meeting Times	76
Media and Librarianship	295
Middle School	284
Minority Affairs, Office of	22
Minors	46, 55
Mission of the College	5
Movement Arts, Health Promotion, and Leisure Studies, Department of	262
Multidisciplinary and Pre-Professional Programs	322
Music, Department of	179

N

New England Regional Student Program	34
Non-Discrimination Policy	5

O

Oceanography	324
Officers of the College	333
Orientation for New Students	14, 26
OUTREACH	33

P

Philosophy, Department of	185
Physics, Department of	190
Physical Science Minor	100, 190

Placement Services	20
Plagiarism	59
Political Science, Department of	195
Portuguese	136
Practicum, Student Teaching	244
Pre-Dental	325
Pre-Engineering	325
Pre-Law	325
Pre-Medical	325
Prerequisites	65, 75
Presidential Scholars	
Tuition Waivers	43
Pre-Veterinary	325
Probation, Academic	55, 66
Professional Education	284
PROGRESS	33
Psychology, Department of	200
Public Archeology Concentration	216
Public Relations Minor	325

R

Radio and Television Minor	285
Reading Laboratory	14
Reading Program	261
Readmission	56
Recreation Programs	19
Refund Policy	39
Registration	
Undergraduate	57
Graduate	69
Religious Life	19
Repeating Courses	
Undergraduate	55
Graduate	68
Residence Halls	27
Charges	38
ROTC	43, 330
Russian	137
Russian and East European Studies Minor	327

S

SACHEM	53
Satisfactory Progress (see also Academic Standing)	56, 65
Scholarships	43
School Administration (see Educational Leadership and Administration)	
School of Arts and Sciences	77
School of Education	240
Scientific and Technical Illustrations	323
Second Degree	34
Secondary Education and Professional Programs, Department of	284
Semester Notations	76
Services to Students	20
Shuttle Service	23
Social and Cultural Events	19
Social Work, Department of	211
Sociology and Anthropology, Department of	215
Spanish	137
Special Admissions Programs	33
Special Education, Department of	311
Special Students	33

Speech Communication, Theatre Arts,
and Communication Disorders,
Department of 226
Standards for Representing the
College 59
Statute of Limitations (Graduate) 67
Student Teaching
(see Practicum, Student Teaching)
Study Abroad 16

T

Teacher Certification 241-246
Teacher Preparation Program 241-246
Technology Center 11
Theatre 227
Thesis 70
Transcripts 364
Transfer of Credit after Admission
Undergraduate 59
Graduate 67
Transfer Admissions 31
Transfer Students 31, 81
Transit System 23
Transportation Concentration 154
Trustees, Board of 332
Tuition and Fees 9, 37

U

Unified Media Specialist 295
Urban Affairs Minor 327

V

Varsity Athletics 19
Veterans Affairs 23

W

Warning Notices 56
Withdrawal from the College
Undergraduate 58
Graduate 69
Withdrawal from Courses 57
Women's Studies Minor 327
Work Study Program 43
Writing Concentration 123
Writing Laboratory 14

Directions for Correspondence

The general address for all correspondence is:

Bridgewater State College
Bridgewater, Massachusetts 02325
Telephone (508) 697-1200

In order to avoid delay, correspondents are requested to note the following when requesting information and materials from the college.

Catalog:

Director of Admissions
Gates House

Office of the Graduate School
Maxwell Library

Course Offering Brochure:

Registrar's Office
Boyden Hall

Transcripts/Course Description:

Registrar's Office
Boyden Hall

There is a charge of \$2.00 per transcript and a \$5 charge for transcripts received on the spot. Course descriptions from catalogs prior to the current issue are \$1 per copy.

Admissions:

Undergraduate: Dean of Admissions
Gates House

Graduate: Dean of the Graduate School
Maxwell Library

Health services, housing, and scholarships:

Student Affairs
Boyden Hall

Financial Aid:

Director of Financial Aid
Tillinghast Hall

Placement:

Director of Career Planning and Placement
Rondileau Campus Center

Alumni Affairs:

Director of Alumni Relations
and Development
Davis Alumni Center

Academic Employment:

Director of Human Resources
Boyden Hall

Teacher Certification:

Director of Teacher Certification
Department of Education
Quincy Center Plaza
1385 Hancock Street
Quincy, MA 02169

Matters not covered above, and correspondence bearing upon the general interests of the college, should be addressed to the president.

*Catalog Compiled and Edited by
the Office of the Registrar and the Graduate School*

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CAMPUS MAP



1. Greenhouse and Louis Sterns/
Robert McNamara Memorial Garden
2. Gates House, Admissions
3. Art and General Classroom Building
4. Woodward Hall (Student Residence)
5. Tillinghast Hall (Health Services,
Financial Aid, and Faculty Offices)
6. Boyden Hall (Classrooms
and Administrative Offices),
Registrar's Office
7. Lee E. Harrington Hall (Classrooms
and Administrative Offices)
8. John J. Kelly Gymnasium
9. Pope Hall (Student Residence)
10. Athletic Field
11. Scott Hall (Student Residence)
12. College Power Plant
13. Headquarters, Campus Police
14. Marshall Conant Science Building
15. Playing Fields
16. Catholic Center
17. Shea Hall and Durgin Hall
(Student Residences)
18. Adrian Rondileau Campus Center
19. Clement C. Maxwell Library,
Graduate School,
Freshman Advising Center
20. Astronomy Observatory
21. Dr. Henry Rosen Memorial
Tennis Courts
22. Edward C. Swenson Athletic Fields
23. Great Hill Student Apartments
24. Martha Burnell Campus School
25. Walter and Marie Hart Hall
24. V. James DiNardo Hall
(Student Residence)
26. Frankland Miles Hall
(Student Residence)
28. Christian Fellowship Center
29. Davis Alumni Center
- ♦ John Joseph Moakley Center –
(expected date of completion –
Spring 1995)
- ♿ Disabled Student Parking

Prof Arthur Dirks
ASSOCIATE PROFESSOR
Speech Communication, Theater
Rondileau Campus Center

BRIDGEWATER STATE COLLEGE

Bridgewater, MA 02325

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